

AMERICAN NURSERYMAN

The Nurseryman's Forte: To Make America More Beautiful and Fruitful

DECEMBER 1, 1938



Liquidambar Styraciflua

Compiling a New Nursery List
More on French Lilacs
Appraising the Bellflowers
Eastern Plant Board Meets

AMERICAN NURSERYMAN

Chief Exponent of the Nursery Trade

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GOVERNMENT NURSERIES.

Soil conservation projects and roadside planting have given an impetus to the production of trees and shrubs in federal and state nurseries the extent of which is little realized and not completely known.

From Utah, for instance, comes report of the purchase of twenty acres on which the state is to grow its own nursery stock for roadside planting. From Idaho comes the statement of the state forester that from twenty to twenty-five prison convicts will be kept busy working in the state nursery. The Florida forest service has distributed a potted pine seedling to each of 240 county agricultural agents and other officials to promote the distribution of 7,000,000 pine seedlings to landowners at \$2 per thousand. Scarcely a week passes without the receipt of a newspaper clipping telling of some state's activity or a new federal nursery. Over 500,000,000 trees and shrubs in use last year in government nurseries were either given away or sold at a nominal cost, it is estimated.

If the forest service wishes to grow tree seedlings to plant in government-owned tracts of land, there can be no objection, though whether commercial nurseries might not supply the stock more cheaply is still a question. But the production of stock that is sold or given away in direct competition with that offered by commercial nurseries is a subject of increasing importance.

So that more accurate data may be compiled, with a view to opening

The Mirror of the Trade

the eyes of those concerned, the American Association of Nurserymen is requesting information of its members on the activities of state nurseries and the Washington office is gathering similar information on federal activities. Questionnaires, also, have been sent to members in the two tiers of states west of the Mississippi river, requesting information on what stock they now have available of the items used in the prairie states forestry project, commonly called the shelterbelt project, and what quantities they would be in position to produce if they were no longer threatened by government competition. So that this subject may be one, not of opinion, but of compiled statistics, nurserymen should interest themselves in the gathering of the data requested and forward it to the Washington office.

GOVERNORS.

Reporting the reelection of George D. Aiken as governor of Vermont in the election of November 8, a paragraph in our November 15 issue indicated the elimination of the present governors of Missouri and Ohio in the same contest.

For the sake of accuracy, it should be stated that Lloyd C. Stark was not engaged in an election contest since his 4-year term as governor of Missouri does not expire until January, 1941. Martin L. Davey, governor of Ohio, was not on the Democratic ticket this autumn, having lost in the primary last spring.

Although Governor Stark was not up for reelection, he is considered to have scored a big victory in the primary election in August, when he stumped the state in behalf of his candidate for the state supreme court against the nominee of the Kansas City political boss, Tom Pendergast, the former winning by almost 120,000 votes. Those who speak of presidential aspirations for Senator Bennett Clark, of Missouri, think Governor Stark, if he went to Washington, would go as Secretary of the Navy. He is a graduate of the naval academy at Annapolis and served in the army with distinction in the World war.

LIQUIDAMBAR STYRACIFLUA.

A tree that is not used to its fullest extent at the northern limits of its hardiness range is Liquidambar Styraciflua, sweet gum, a native of the southern forests. Nurserymen in the northern belt of its range, who wish to add an item that will give customers something different in a lawn or specimen planting, will likely find this a profitable item.

Although the sweet gum is more common in southern forests, it is hardly as far north as Illinois, Michigan and Connecticut, states where it has not been planted to its fullest extent. Some beautiful specimens may be seen at the Missouri Botanical Garden, St. Louis, where, because of its ability to withstand adverse city conditions, it is considered an excellent tree for street plantings.

L. Styraciflua grows to 140 feet in southern plantings, but in the north it seldom exceeds sixty to seventy-five feet. It is distinguished by its tall, straight pyramidal growth, corky, winged twigs and sweet-smelling resin. The 5-lobed to 7-lobed leaves, often referred to as stars, are a dark lustrous green with a pale underside. The flowers are small and inconspicuously borne in globe-like clusters, while the fruits are spherical-shaped collections of shiny brown capsules, each tipped with a spine, the whole making a round spiny ball that persists throughout the winter. The brilliant autumn colors, bright crimson, orange and yellow, of the foliage, together with its deeply furrowed bark and perfect star-shaped leaves, make this tree a truly all-year specimen. Few trees display such gorgeous colors throughout the year as this native of the south.

Liquidambar Styraciflua prefers a deep, rich soil and will not tolerate shade. It is best propagated by seeds, which, even if stratified, will not germinate until the second year. It is a difficult tree to transplant, probably one of the reasons for its apparent lack of popularity in its northern range, and should be moved with a ball of soil in the spring and pruned severely.

AMERICAN NURSERYMAN

[Registered U. S. Patent Office]

The Chief Exponent of the American Nursery Trade

*The Nurseryman's Forte:
To Make America More Beautiful and Fruitful*

VOL. LXVIII

DECEMBER 1, 1938

No. 11

Compiling a New Nursery List

Fourth in a Series of Articles Dealing with Selection of Superior Varieties of Woody Ornamental Plants Discusses Small Deciduous Shrubs — By L. C. Chadwick

It is a well conceived fact that as the size group of our common deciduous shrubs increases the number of shrubs in each size group also increases. In the previous article, discussing the low shrubs, it will be recalled that there were twenty-four genera and approximately eighty plants within the group. Twenty types were selected as those most worthy of extensive propagation and use.

In group 4, which includes the small shrubs ranging from four to five feet in height, there are approximately thirty-three genera and 100 different plants. Even this number does not include some of the exceedingly rare genera and species and many of the horticultural varieties. Another factor that makes the task of selecting the outstanding types more difficult is the apparent greater overlapping of plants between this group and the next larger size. Cultural and environmental factors all influence the ultimate size of plants. It has been my endeavor to include in this group those plants which come just below the eye level. If your favorite shrub is not mentioned in the preferred or the "outcast" list, it probably will be included in our next discussion.

The fact that the shrubs in this group come just below the eye level makes their use more or less restricted to border planting, where they can be used to face larger shrubs, or as accent points in mass plantings, as foundation plants or as single specimens. The plants in the "preferred" list have been selected on the basis of growth habit, good foliage, flower

and fruit. Not all of these characteristics are exemplified in each plant. General satisfaction in a wide range or environmental conditions is a point of consideration.

Of the thirty-three genera of plants in this group, seventeen are omitted altogether, although some of them, in fact six, have species found in the selected list of other size groups. The seventeen genera with species and the more common varieties omitted are: *Amelanchier humilis* and *stolonifera*, *Berberis diaphana* and *circumserrata*, *Calycanthus floridus*, *Caryopteris incana* and *tangutica*, *Cephalanthus occidentalis*, *Comptonia asplenifolia*, *Daphne Genkwa* and *Mezereum* and varieties, *Deutzia candelabrum* and varieties, *Itea virginica*, *Kerria japonica* and its varieties *pleniflora* and *picta*, *Myrica Gale*, *Neviusa alabamensis*, *Physocarpus intermedius* and its variety *parvifolius*, *Prinsepia sinensis* and *uniflora*, *Prunus glandulosa* and varieties *alba* and *rosea*, *Shepherdia canadensis* and *Stephanandra flexuosa*.

Shortcomings.

It is not possible to go into detail why these genera, species or varieties have been omitted entirely. May it suffice to mention just a few of their shortcomings, which are undoubtedly known to many of you. *Amelanchier humilis*, low shad-blow, and *A. stolonifera*, running shad-blow, are restricted in use mainly to underplanting in woody areas or as a source of bird food. Their use is limited in the average landscape planting. *Berberis diaphana*, *Kansu barberry*, and *B. circumserrata* have not been tried suffi-

ciently over a wide range of environmental conditions in the midwest to warrant a place on our selected list. *Calycanthus floridus*, sweet shrub, is relatively coarse and does well only in full sun and well drained but moist, rich soil. Its only outstanding characteristic is its reddish brown spicy-scented flowers which are almost completely hidden by the large leaves. The sweet shrub, as well as *Calycanthus fertilis*, often grows to heights outside the limits of this group. *Caryopteris incana*, bluebeard, and *tangutica* are too subject to winter injury to be included in a selected list of woody ornamental shrubs. They are valued for their lavender blue flowers in August and September and possibly could best be treated as herbaceous perennials. *C. tangutica* seems slightly more hardy than *C. incana*.

Cephalanthus occidentalis, common buttonbush, may be of limited value for naturalizing and roadside planting, especially in wet situations. Its coarseness and short foliage period limit its use in general landscape work. *Comptonia asplenifolia*, sweet fern, has not proved to be of much value in the middle west. It apparently appreciates well drained, sandy, acid soils and a relatively cool atmosphere to be at its best. It could well find a place on our "preferred" list if these conditions are present.

Daphne Genkwa, lilac daphne, and *D. Mezereum*, February daphne, have likewise been of little value for general landscape planting outside of their native habitat or situations exhibiting similar conditions. They are prized for their lilac-purple flowers in February and March. *D. Genkwa* is

somewhat tender. *Deutzia candelabrum*, *candelabra deutzia*, and its variety *fastuosa* have not found their way to any extent into the trade. They do not have any outstanding characteristics to recommend them over the *deutzi*as which were mentioned in group 3 or those which will be listed in group 5.

Itea virginica, sweet spire, is attractive in flower, but is rather a poor grower and requires at least partial shade and abundant moisture for best results. *Kerria japonica*, *kerria*, and its varieties *pleniflora*, with double flowers, and *picta*, with variegated leaves, are too tender and subject to blight to warrant a place on our selected list. The yellow flowers and green stems are the main features. *Myrica Gale*, sweet gale, is adapted only to naturalizing in wet soil situations. *Neviusa alabamensis*, snow wreath, is valued chiefly for its white feathery flowers in June. It has few other characteristics to commend its use.

Physocarpus intermedius, Illinois ninebark, and its variety *parvifolius* are not materially different than *Physocarpus monogynus* discussed in the last article, which is my choice of the small, compact forms.

Prinsepia sinensis, cherry prinsepia, and *P. uniflora*, white prinsepia, have not been tried sufficiently to ascertain their value over a wide range of conditions. *Prunus glandulosa*, flowering almond, and its pink and white double-flowering varieties are highly susceptible to blight and borers. Other than for their flowers they are not outstanding in any respect.

Shepherdia canadensis, russet buffalo berry, has attractive brown scurfy twigs and red fruit, but it is not adaptable to general culture. *Stephanandra flexuosa*, cutleaf stephanandra, has interesting foliage and zigzaggy twigs, but is subject to winterkill which limits its use.

Twenty Best.

The selected plants in this size group have been limited to twenty. Not all are equally outstanding and some will be replaced as better species or varieties are developed. Some of the other species or varieties might replace some of those on the selected list for use in definite localities, but for wide adaptability the following twenty plants are my selection for the best in this size group:

Abelia grandiflora—Glossy abelia.
Azalea Kaempferi—Torch azalea.
Azalea molle—Chinese azalea.
Callicarpa purpurea—Chinese beauty-berry.
Caragana Maximowicziana.
Cotoneaster apiculata.
Diervilla sessilifolia—Southern bush honeysuckle.
Hydrangea quercifolia—Oakleaf hydrangea.
Hypericum prolificum—Shrubby St. John's-wort.
Lonicera thibetica—Thibetan honeysuckle.
Philadelphus Lemoinei—Avalanche.
Rhus canadensis—Fragrant sumac.
Ribes alpinum—Mountain currant.
Rosa lucida—Virginia rose.
Spiraea arguta—Garland spiraea.
Spiraea Bumalda—Froebel spiraea.
Spiraea Reevesiana—Reeves spiraea.
Symphoricarpos racemosus laevigatus—Garden snowberry.
Viburnum Burkwoodii—Burkwood viburnum.
Viburnum Carlesii—Fragrant viburnum.

Reasons for preference of the species and varieties selected over others of the same genera will be found in connection with the discussion of the selected types.

Few shrubs possess as many attractive characteristics as *Abelia grandiflora*, the glossy abelia. At maturity this plant reaches a height of five to six feet or more, thus becoming larger than the sizes of this plant group, where it is perfectly hardy. Its somewhat tender nature restricts the area over which it can be used effectively. It has long drooping branches bearing small, semievergreen, glossy green leaves. The pinkish white, bell-shaped flowers are borne near the ends of short side branches and are effective from late June until frost. The glossy green foliage and long blooming habit make this plant especially attractive during the summer months. The glossy abelia may be employed in many ways. It may be used as a specimen plant, as a border or foundation plant where it combines readily with deciduous, narrow or broad-leaved evergreen plants and as a hedge in localities where it is hardy. *Abelia* combines especially well with such broad-leaved evergreens as *pieris*, *leucothoe* and *ilex*. Peaty, well drained soil is to the liking of *Abelia*. While it will stand shade, it is best used in sun in somewhat protected places, in the colder climates, so that the wood may become well ripened by the time cold weather appears.

Abelia Schumannii has really not been tried sufficiently over a wide range of environmental conditions to warrant a place on our selected list.

It may prove equal to the glossy abelia and in some sections even better.

It is rather difficult to choose one or two of the outstanding azaleas from the list that comes within this group. My choice, however, is *Azalea Kaempferi*, torch azalea, and one of the varieties of *Azalea molle*, Chinese azalea, perhaps the variety *Louisa Hunnewell*. This variety has also been considered a variety of *Azalea Kosterianum*. This would eliminate such species as *japonica*, *mucronulatum*, *poukhanense* and *yodogawa*.

Azalea Kaempferi is probably the best red-flowering azalea for northern sections. A good grower, it reaches a height of six feet and produces an abundance of bloom in May. *Azalea molle* is one of the most satisfactory azaleas for midwestern conditions where hot and dry summers are common. It will bloom well in a soil that is only slightly acid.

Some might question the feasibility of including *Callicarpa purpurea*, Chinese beauty-berry, in the selected list. Even though it is comparatively tender, it is one of the few shrubs that have attractive violet berries which give a striking appearance in early autumn. It should be used where, if it is cut down to the ground in the spring, it will not be objectionable. *Callicarpa Giraldeana* is much hardier but larger.

Caragana Maximowicziana grows to a height of about five feet and appears to be one of our most promising small shrubs. The leaves are compound with small, bright green leaflets, not more than one-fourth to one-half inch in length. With a spread of about ten feet this plant is densely branched and compact. The flowers are yellow, appearing in May and June, and about an inch in length. As a formal shrub for specimen or group planting, or for a low hedge, this plant should find wide use.

Cotoneaster apiculata, within a relatively few years, has become one of our most important small shrubs. A plant of four to five feet in height with round, wavy, dark glossy green foliage, pinkish white flowers and exceptionally large red fruits, this shrub is everything one could desire in a low, compact shrub. It is of rapid growth, of round-irregular habit, with drooping branches. There are few small shrubs better adapted for foundation planting or facing shrubbery borders. By

[Continued on page 15.]

More on Best French Lilacs

Lists Submitted by Nurserymen Lead One Reader to Count Votes for Varieties and Another to Tabulate Orders for Lining-out Stock

TABULATES VOTES.

The article on lilacs in the November 1 issue greatly interested me, as I have given them much attention for over twenty years. As you of course know, there was held in London last April a conference on ornamental flowering trees and shrubs, which I was fortunate enough to be able to attend. The complete report on this conference has recently been received. It contains four lists of lilacs similar to the ones you published, but one of them was supplied by Dr. Donald Wyman, of the Arnold Arboretum.

It occurred to me that it would be interesting to make a joint tabulation of your four lists and the four given there, which has been done. Counting the presence of any variety in any of the lists as one vote, the outcome is as follows:

Six votes—Ellen Willmott.

Five votes—Katharine Havemeyer, Maréchal Foch.

Four votes—Captain Baltet, Ludwig Spaeth, Masséna, Mme. Lemoine, Mont Blanc, Mrs. Edward Harding, President Lincoln, Réaumur.

Three votes—Charles X, Edith Cavell, Etna, Hugo Koster, Jan van Tol, Maréchal Lannes, Michel Buchner, Mme. Antoine Buchner, Mme. F. Morel, Oliver des Serres, Paul Thirion, President Fallières, Vestale.

Two votes—Belle de Nancy, Charles Joly, Congo, Edouard André, Georges Bellair, Hippolyte Maringer, Léon Gambetta, Lucie Baltet, Marceau, President Grévy, President Poincaré, Waldeck-Rousseau.

One vote—Alphonse Lavallée, Ambassadeur, Bleuatre, Buffon, Charles Sargent, Christopher Columbus, Claude Bernard, Comte de Montebella, De Mirabel, Diderot, Emile Gentil, General Pershing, Jacques Callot, Jeanne d'Arc, Jules Ferry, Léon Simon, Lilarosa, Louvais, Maurice Barrès, Maximowicz, President Loubet, President Massart, President Viger, Prodiges, René Jarry-Desloges, Thunberg, Vauban, Volcan.

I have a few comments to make on the above.

The 4-vote group includes Réaumur. Over a period of several years

we compared this variety carefully with Ruhm von Horstenstein and decided that the latter was superior and yet it does not even appear in the group receiving one vote.

Mme. F. Morel receives but three votes. My personal opinion is that it is about the best single lilac in the well known sorts.

It seems strange that varieties of such superlative excellence as Hippolyte Maringer and particularly Léon Gambetta can receive only two votes each. They are both fine doubles, in which the flowers are not so tightly packed in the cluster as to impair or even destroy the beauty, which is one of the faults I find with Katharine Havemeyer, President Poincaré, etc.

If there is a better pink than Buffon, I have never seen it. Also if there is a freer bloomer on an excellent compact bush than Diderot, I don't know what it can be. Maximowicz is easily enough one of the best semidoubles. These three varieties received only one vote, probably mine.

My general criticism is that the list, as a whole, contains too many of the inferior older varieties which have been far surpassed in their own class by later ones. That I am not generally disparaging the older varieties is shown by the fact that my list included Souvenir de Ludwig Spaeth. Apparently others hold the same high opinion of it, as it was included in four lists out of the eight.

By next spring I think we can give a full report on the behavior here in California of the latest European varieties, as the plants should be old enough by then to give characteristic blooms. We are doing a little work on breeding lilacs, in the hope of getting some that are particularly adapted to Pacific coast conditions. Results are at least encouraging, although nothing startling has occurred yet.

One of our great favorites could not be included in my list, as we do not know its name! We received it about twenty years ago as Perle de Stuttgart. It proved to be a fine white variety, and it was not until recently that we noticed in Mrs. Mc-

Kelvey's book that it should be pink. Whatever it is, I regard it, as a garden plant, about the best single white variety. The individual thyrses will not compare with those of Jan van Tol, but they are of medium size, beautifully formed, borne in great profusion and, best of all, carried well above the foliage. It is so good that we must continue growing and distributing it under the temporary name of Pearl until we can find out what it actually is.

In closing, it might be of interest, inasmuch as Lemoine is responsible for nearly all the world's best lilacs, to give his selection of the best varieties; it is as follows:

Single: Vestale, Marceau, Mont Blanc, Captain Baltet, Masséna, Maréchal Foch, Etna, Prodiges, Ambassadeur.

Double: Mme. Lemoine, Ellen Willmott, Mme. Antoine Buchner, President Poincaré, Paul Thirion, Edith Cavell, Katharine Havemeyer, Mrs. Edward Harding, General Pershing.

W. B. Clarke.

W. B. Clarke & Co., San Jose, Cal.

LINING-OUT LILACS.

We read with much interest the article in the November 1 issue embodying the views of four prominent nurserymen on a list of best French lilacs. As you will see from our catalogue, we list lining-out lilacs in thirty-five varieties, but have decided to discard two of these varieties, Marie Legraye and Edith Cavell, since publication of the catalogue.

We wondered of which of these varieties we had actually shipped the greatest number of plants and consequently checked our orders, beginning with the autumn of 1934 and including the spring of 1938 shipments. A tabulation shows thirteen varieties most frequently ordered, and of these thirteen, seven varieties comprise more than fifty per cent of the total plants sold. The selections are purely on sales of wholesale lining-out stock, totaling 18,266 in the 3½-year period.

The list of thirteen follows:

Single: Jan van Tol, white; Lamar-

tine, violet; Cavour, blue; President Grévy, lilac; Charles X, purple; Ludwig Spaeth, red; Horstenstein, red.

Double: Mme. Lemoine, white; Katharine Havemeyer, blue; Maréchal Lannes, lilac; President Fallières, lilac; Charles Joly, red; Mrs. Edward Harding, red.

Of the foregoing thirteen varieties the following comprised more than fifty per cent of the sales: Mme. Lemoine, Katharine Havemeyer, President Grévy, Charles X, Ludwig Spaeth, Charles Joly and Mrs. Edward Harding.

C. Courtney Seabrook,
Koster Co., Bridgeton, N. J.

ENGLISH LIST OF LILACS.

The magazine of the Royal Horticultural Society of England for November, 1936, contained an article on the cultivation, propagation and distribution of lilacs, by H. G. Hiller, in which the author listed twenty-four select varieties of French lilacs. In discussing the varieties, Mr. Hiller wrote:

"For the sake of convenience I am giving a list of two dozen first-class varieties, and among these I think most lilac enthusiasts would agree I have included the ten best, though opinions would vary in choosing these ten; further, I realize that in including any one variety I have necessarily excluded others which some consider as good."

The twenty-four varieties of French lilacs as selected by Mr. Hiller are:

Single: Massena, purple red; Mont Blanc, white; President Lincoln, blue; Réaumur, purple; Vestale, white; Monge, purple (not in common cultivation); Captain Baltet, purple; Etna, pink; Andenken an Ludwig Spaeth, red; Souvenir de Ludwig Spaeth, violet; Madam Francisque Morel, purple; Marceau, red; Maréchal Foch, red, and Laplace, purple.

Double: Belle de Nancy, purple; Edouard André, pink; Emile Gentile, blue; Mrs. Edward Harding, pink; Olivier de Serren, purple; Paul Thirion, pink; President Loubet, red; Katharine Havemeyer, blue; Madam Antoine Buchner, carmine, and Madam Lemoine, white.

LEAF blotch is a fungous disease, usually prevalent on all trees during seasons of heavy rainfall.

ANALYSING ADVERTISING

V.

Having decided upon the medium which will fit his type and size of business, the nurseryman next is concerned with the layout of his particular sales message.

The layout of an advertisement depends first of all upon the type of prospects. Compare, for instance, the wholesaler's price list and the retail nurseryman's catalogue. The wholesaler takes it for granted that the recipient of his price list is going to buy nursery stock, and just tells what he has to offer and the price. The retail nurseryman has to interest his prospects before he sells to them, and hence he uses illustrations and enticing descriptions, well displayed for easy reading.

When the retail nurseryman uses newspaper space, he finds himself in competition with many merchants after the public's dollars. So his message must be striking, well displayed and well worded to attract attention and get action. Hence he will do well to get one idea across, instead of scattering his ammunition like buckshot. Illustrations and headlines, with a limited amount of copy, serve him best.

It is doubtful if a nurseryman advertising in a garden magazine or a wholesaler using space in a trade paper can take too much for granted that buyers are interested in his merchandise. Often the difference between an advertisement paying and not paying is the use of suitable space and copy to tell prospects of the particular merits of the stock or service offered. No organization is just like another, and the best advertising copy is that which tells why yours is different.

The familiar saying, "One picture is worth more than 10,000 words," is certainly true in presenting a tree or shrub, whether a Chinaman or an advertising man first uttered it. But much depends upon the picture; it must have a meaning, or else it conveys no message. Just to add an illustration to the layout is not enough. Moreover, it should be a good picture.

Color is also important, in arresting attention and in presenting bet-

ter pictures. But it is often overdone. The nurseryman should go in for color only when he is versed in advertising or employs an advertising man.

Most important is making an advertisement easy to read. Avoid small space packed with type. Give ample space to display lines, and use type large enough to be easily and quickly read. Large type set solid is less easy to read than a smaller size set leaded; that is, with space between the lines.

Simplicity is a merit of good display space often overlooked. Work hard to get one thought firmly into the reader's mind, and then follow it up with description or "sales talk" to the extent that space is available. But avoid patchwork pieces and fancy flourishes.

CERTIFIED ROOTSTOCKS.

The New Jersey agricultural experiment station and the state department of agriculture have worked out a plan whereby nurserymen may be sure of obtaining true-to-name budwood of any new peach varieties developed at the station.

According to the plan, budwood of four new varieties was certified as true to name on the basis of inspection by a specialist from the station, while the fruit was ripe on the tree, and the location of each tree was marked on a map of the orchard in which the tree is located.

Whenever bud sticks are cut, an inspector from the department is on hand to issue a certificate showing the name of the variety and the number of buds or bud sticks cut, as well as the freedom of the trees from peach yellows, little peach or other injurious pests.

The trees certified this year were Triogem, Goldeneast, Summercrest and Goldenglobe. It is planned, if sufficient demand develops, that next year more varieties and sources will be made eligible for certification.

SPECIFICATIONS of trees and shrubs purchased from nurseries, as they have been used by the board of county road commissioners of Wayne county, Mich., are set forth in detail by J. M. Bennett, superintendent of parks and forestry, in the November issue of Parks and Recreation, the monthly organ of the American Institute of Park Executives.

Appraising the Bellflowers

Second in Series of Articles on Campanulas, a Genus of Wide Variety and Adaptable to Many Uses and Conditions—By C. W. Wood

Campanula persicifolia, the peach-leaved bellflower of gardens, is a most worthy plant, combining ease of culture with spectacular beauty. No wonder, then, that, aside from the Carpathian harebell, it is one of the most frequently used of the species. Observation leads one to believe, though, that much more business would be done if all growers took the pains to grow the improved varieties. Of the latter a number are now in American commerce, and no doubt more will reach us in the near future. If you have not grown any of them, it will pay you to get true stock of the better kinds, such as Telham Beauty, Moerheim, Summer Skies, humosa and Pfitzeri. These are truly revelations of beauty, all distinct enough to merit a place in any list and worthy of the little extra work needed to reproduce them from division or cuttings.

To me the most spectacular of all the peach-leaved kinds is Telham Beauty, a truly remarkable plant and one of vast possibilities. Much harm has been done this variety, if I am not mistaken, by the marketing of seed-grown plants under the Telham Beauty label. In fact, every case of disappointment that I have run to ground has ended in the fact that the plants were grown from seeds saved from Telham Beauty. It would be useless to go into details regarding the make-up of this variety, for it would lead into a morass of chromosomes and other technical matters which I understand perhaps no better than other ordinary plant growers, but I can say, judging from numerous trials, that true Telham Beauty will not come out of a seed packet much more frequently than once in a million times. At least, I have never had one come true from seeds, and the material I have seen in other nurseries which was reproduced in that way has never shown the immense, bright powder-blue saucers on spires to four feet in height of which the true plant is capable under good treatment. So much space has been devoted to this one variety because it is too good to have its reputation spoiled by having erroneous material

sold under its label. It is good not only for garden adornment and for cutting from outdoor stock, but it is a splendid thing for forcing in greenhouses, producing outstandingly different cut flowers in late winter. Its propagation is both easy and rapid by means of division in midsummer after the flush of the flowering season is over, or in early spring if flowers are not wanted.

The other kinds mentioned before are also deserving of the same care. After Telham Beauty, my choice is Moerheim, because of its pure white, double, camellia-like flowers on 2-foot stems, over the long season from mid-May until late July or early August. The large, double, blue flowers of varieties Pfitzeri and humosa and the cup-and-saucer-like blooms of Summer Skies in pale lavender are not to be ignored in any appraisal of peach-leaved varieties.

Just a little less lovely than the best of the peach-leaved kinds are the better forms of *C. latifolia*. Although the floras give it a height of three or four feet, ordinary material grown from seeds of the type grows about two feet tall in my garden, but variety *macrantha* does do better, usually attaining a stature of three feet under good culture, and its flowers are both larger and longer. The flowers of the latter are also a beautiful deep violet instead of the lilac blue of the type, but perhaps the loveliest of the variations is the form *alba*, with large, pure white flowers, though one hears of another variety, Brantwood, in Europe, which is said to have large, dark blue flowers as much as three inches in length. All these *latifolia* bellflowers—*latifolia* because of their broad root leaves, some of which are three or four inches long and two or three inches wide—are good in ordinary border soil in sun or partial shade, flowering during June and July. They are easily satisfied and are readily reproduced from division or from seeds if named forms are not being handled.

The milk-white flowers of *C. lactiflora*, which seem to have made up their minds to be pale blue, but stopped short of their goal after they

acquired too much blue to be called white, are a little too wishy-washy to attract much attention, but give them the light blue color of variety *cærulea* and you have a really good ornament. Garden material of this species never, in my experience, attains the 6-foot stature ascribed to it by botanists, but a 3-foot plant carrying several large trusses of light blue, bell-shaped flowers from mid-June until well into July, extending the season of *latifolia* and its varieties, is something to cherish. Like the latter, it is easily accommodated in sun or light shade and is propagated in a similar manner. In this connection, it might be added that *C. celtidifolia* is said to be a large-flowered form of *lactiflora* with flowers of a deeper blue. If that is true, it would be a valuable plant and we should have it, but I have not been able to get such a thing from seeds, though I did have a monocarpic plant under this label a few years ago that I should like to get again. It was like a glorified *C. glomerata* in some ways, except that the tubes were shorter, being more like *C. lactiflora* in that respect, and it was invariably monocarpic. There is much good material here that should be searched out and made available to gardeners.

All of which leads us logically to perhaps the most variable of the bellflowers, *C. glomerata*, which is to be found in a number of forms varying in height from the three inches of variety *acaulis* through intermediate lengths to the eighteen inches to two feet of variety *dahurica*. Of all the forms that I have grown (I have missed entirely variety *speciosa*, which is said to have the largest flowers of all *glomerata* forms) I believe varieties *acaulis*, *alba* and *dahurica* are of the greatest value to neighborhood growers. The first has dense heads of deep, rich violet flowers on 3-inch or 4-inch stems from May until August. The second is white, as the name implies, and grows about a foot high, while *dahurica* has lengthened its stem to eighteen inches or more and has large heads of violet purple flowers during June and July. In addition to having more than ordi-

nary value as a garden plant, dahurica, because its flowers are gathered together in clusters, instead of being spread along the stem as is the case with so many of the bellflowers, is especially good for cutting. Incidentally it is a good field for selection of better colors, as its present predominantly violet purple does not combine well with some colors and is objectionable to some folks. Because all of its forms come true from seeds, that is the method usually followed in their propagation. There is nothing delicate about the plants at any stage of their growth, seedlings growing rapidly and mature plants behaving splendidly in any sunny or lightly shaded spot with good drainage.

In *C. alliarifolia* and *C. sarmatica* we have two closely related Caucasian bellflowers of long blooming habit which deserve more attention than they have so far received in this country. Their greatest difference, judging from the garden standpoint, is the flower color, which is white in the former and pale blue in the other, both being bell-shaped and of a thick leathery texture. The latter feature makes the individual flowers last a long time and, as the flowers appear at intervals of time and space along 18-inch stems, it all creates a long season of color. In addition to that, both are easy of culture in well drained soil in sun. Their tomentose leaves are resentful of excess moisture, but otherwise they present no cultural difficulties, and the large seeds germinate rapidly and surely.

The throatwort, *C. Trachelium*, is, in my opinion, too coarse for general garden planting, but it has, because of its indestructible nature and its deep blue or white bells from July onward on 2-foot stems, a definite value in the wild garden. Similar in many ways to the throatwort is *C. Grosseii* of eastern Europe. It lacks the long blooming season of *C. Trachelium*, crowding most of its performance into the month of July, but its large, violet bells in a long raceme give us a better garden plant while it is occupying the stage. It could well be made more of by neighborhood growers, its ease of culture in ordinary garden soil and either sun or partial shade adding one more plant to the list of unexacting bellflowers.

I purposely left *C. mirabilis* for the last, hoping to give it special atten-

tion, but am afraid that space will not permit the extended comment I had planned. First of all, it is a truly marvelous plant, as the specific name indicates. Its foot-high or less growth supports an incredible number of pale blue bells as much as two inches across. One would expect some catch in anything as lovely as *mirabilis* can be and we find it in the fact that the plant is monocarpic, but that need not deter any person from enjoying its beauty, for it produces an abundance of seeds, which quickly produce flowering-size plants and they are easily handled in any sunny spot that is not bone-dry. Bailey's comment that it is "a handsome and remarkable plant" is borne out by its garden behavior and by its history, both of which are better told by Farrer than by anything I could say. "Take a silverless rosette," he wrote in "My Rock Garden," "of *Saxifraga Cotyledon*; stick into it a rather small-flowered pale blue Canterbury bell spike, and you will then have *C. mirabilis*, that most ancient of all campanulas, a plant almost geologic in its antiquity, of which only one specimen has ever been discovered, and that with only one sound capsule of seed." Seeds of *mirabilis* are not easy to come by (I have not had it in five years and have bought repeatedly what was said to be it), but the results of a successful search would be worth all the effort.

GLOBE WILLOW.

Salix umbraculifera, a single-stem willow of fairly rapid growth which develops a globe-shaped head without



Globe Willow.

shearing, was introduced to the nursery trade by H. H. Cummins, of Melba, Idaho, who propagated it from stock received from the United States bureau of plant industry.

Probably the only formal willow under cultivation, it is a valuable tree for formal plantings, has proved perfectly hardy at Melba and withstands heat and drought as well as low temperatures.

The leaf is long and narrow, light green in color, as is the bark of the young tree. Not so stiff as *Catalpa Bungei* and globe locust, it requires a modicum of trimming to maintain its symmetry as it grows older.

TREES FOR NEW YORK.

Three square blocks of New York city's sidewalks will be restored to their former state of cool and shade through an extensive tree-planting schedule inaugurated by Rockefeller Center, Inc., November 19.

The first of 150 oriental plane trees, more than sixteen feet high, was planted November 19 at the corner of Fifty-first street and Fifth avenue. Purchased by Rockefeller Center, Inc., the trees, when set in place, will become the property of the New York city park department. The planting will be supervised by the park department and A. M. van den Hoek, horticultural director of Rockefeller Center. It is anticipated that it will take two weeks to complete the job.

The trees, brought from Long Island and New Jersey, will line the south side of Fifty-first street, both sides of Forty-ninth and Fiftieth streets, the north side of Forty-eighth street and Rockefeller plaza between Forty-ninth and Fiftieth streets. Placed equidistant in the sidewalks near the curbstones, each tree will be given a cubic yard of composted topsoil to ensure its healthy growth.

The oriental plane tree was selected because of its luxuriant shade, quick growth and freedom from attack by bugs and insects.

CREWS of W. P. A. workers have started planting 4,000 elms along more than twenty streets in Buffalo, N. Y., as a part of a project to preserve Buffalo's fame for beautiful trees. According to Guy W. Rice, area director, the total cost of the work has been estimated at \$41,916.

Eastern Plant Board Meets

Favorable Action on Nurserymen's Resolutions for Removal of Trade Barriers and Discussion of Dutch Elm Disease Feature Annual Meeting of State Inspection Officials at Baltimore

The fourteenth annual meeting of the Eastern Plant Board, at Baltimore, Md., November 16, was given over entirely, during the day, to a discussion of the Dutch elm disease eradication program, with talks by various officials from the federal and state standpoints. G. T. French, of Virginia, presided.

Lee A. Strong, chief of the federal bureau of entomology and plant quarantine, gave a résumé of the history of the project and pointed out that there has been an expansion in infested territory each year. Up to the present time 44,366 diseased trees have been found and destroyed. In 1936 and up to May, 1937, 624,850 elms were silviced in an attempt to kill off worthless trees in areas difficult to scout for the disease during the summer months. These were mainly located in mountainous or swampy areas. The results were not entirely successful, since the trees were not killed, but merely weakened in many cases, becoming favorable breeding places for the bark beetle which carries the fungus from tree to tree. As a result of the failure of this attempt, a large population of bark beetles developed in 1937-1938. Over 54,000 of these trees were again silviced and eleven per cent have been cut and destroyed.

Up to the present time \$15,997,237 has been spent by the federal government either through regular appropriations or relief funds. Mr. Strong made the statement that he felt that eradication still seemed possible, but was going to be more difficult than had originally been thought. He thinks it is worth while to continue eradication efforts.

Dr. W. H. Rankin, of New York, the first of several speakers presenting state viewpoints, felt that the failure of detecting the diseased trees was the weakest part of the whole program and suggested that this was due partly, at least, to the type of personnel necessarily employed on relief funds. A. B. Buchholz, discussing the subject for the New York department of agriculture, made the emphatic statement that if the project

was continued on W. P. A. funds under the present restrictions, New York state was not interested in further coöperation. They would immediately change their eradication program to a control program.

Dr. Edgar G. Rex, of New Jersey, presented data indicating that the large increase in the number of diseased trees in that state was due to the failure of the silvicing operation. This is a process wherein copper sulphate is placed in a girdle under the bark in the hope that it will kill the tree and make it unfavorable for beetle breeding.

Dr. R. B. Friend, of Connecticut, explained the increase in the number of diseased trees in Connecticut this year as due to piles of elm wood scattered throughout the territory. They could not trace the increase to failure of silvicing.

Dr. F. N. Wallace, speaking for Indiana, again pointed out the inefficiency of W. P. A. labor and felt convinced that with good scouts that territory could really be cleaned up.

Dr. E. P. Felt, first of the speakers from the nonofficial viewpoint, pointed out several weaknesses in the program, the most important of which was the failure of silvicing and the labor shortage of scouts. His opinion was that the disease could not be eradicated in areas where the bark beetle population was heavy and that we must eventually learn to live with it. He also pointed out the possibility of infected beetles being carried by the wind for long distances. This would explain several outlying areas of infestation and infection which showed up this year.

W. P. Wharton, president of the Massachusetts Park and Forest Association, asserted that the battle would be lost if there was no change in the funds on which the project is continued. He quoted at length from the report of Dr. Faull and Dr. Boyce published in the Arnold Arboretum bulletin recently, quoted in the American Nurseryman of November 1.

G. H. Collingwood, of the American Tree Association, reported on the activities of a group which was in

Washington recently to confer with Secretary of Agriculture Wallace, Major Harlowe, of Works Progress Administration, and Mr. Bell, acting director of the budget. They convinced Secretary Wallace that regular appropriations should be obtained for all scouting activity, and it is likely that a supplementary request for funds has been submitted to the budget bureau for this activity. They convinced Major Harlowe of the fact that W. P. A. employment was not satisfactory for this technical job and received a cordial hearing with Mr. Bell. The outcome of all this, of course, will not be known until the budget appears soon after Congress assembles.

For the research program, Curtis May, of the bureau of plant industry, and F. C. Craighead, of the bureau of entomology and plant quarantine, spoke briefly, the former pointing out that certain inoculated trees never developed symptoms of the disease and that there was a possibility for recovery of infected individual trees even after the symptoms had appeared.

In discussion, R. H. Bell, director of the Pennsylvania department of agriculture, made the statement that if additional funds were not made available for scouting, the outlook was not encouraging. R. P. White, A. A. N. secretary, criticized the research program on the basis that additional efforts should be made for the selection and development by breeding of resistant and immune American elms. Since certain American elms, according to Curtis May, never develop symptoms after an inoculation and others are able to recover after the disease has appeared on them, it would indicate definitely a percentage of the population of American elms to be highly resistant. Such individual trees should be further tested and propagated freely. R. Kent Beattie, of the federal bureau of plant industry, and C. E. Temple, of Maryland, also engaged in the discussion period.

Opening the evening session, Avery S. Hoyt, of the bureau of entomology and plant quarantine, re-

viewed in general terms the importance of quarantine and large-scale eradication programs. He felt that beetle population in an isolated territory could be retarded by the program of applying arsenate of lead. Probably some extension of the quarantine area would be made in Ohio and North Carolina. Fumigation with methyl bromide was mentioned as a possibility for eliminating adult beetles from shipments going from infected areas to noninfected areas. Methyl bromide has a wide range of use for many insects, but certain plants are injured by it.

B. M. Gaddis' report on the white-fringed weevil was given by Mr. Sheals of the same bureau. Some extension in the infected territory was determined in 1938, but no nurseries were involved in the new area. Nurseries are included in the Mississippi and Louisiana area of previous determination. No infection was found in areas where nursery stock or other materials were shipped from these nurseries previous to the state quarantines, although shipments were made to practically every state in the Union. Sixty-five to ninety-five per cent mortality for adult beetles was obtained by the use of calcium arsenate dust. Natural spread of the insect was effectively stopped by clean culture, artificial barriers, etc.

The oriental plane disease situation was presented by Hollis J. Howe, city forester of Baltimore, Md. The disease is now known to occur in the Philadelphia area, Baltimore and Washington. W. B. Ranck spoke on foreign plant quarantine activities at the port of Baltimore.

Dr. T. J. Headlee, of New Jersey, restated the principles for inspection which were adopted by the Eastern Plant Board as follows: A state inspector must know the disease and insects present in his territory at all times, must provide for the prohibition of all movement of infested or infected stock, must provide for satisfactory treatment of infested or infected stock under supervision, must provide for the removal of restrictions on shipments as soon as the cause for restrictions is removed, must provide for the control of movements of nursery stock through certification, and must insure freedom from disease and insects of material shipped into his territory.

The second part of Dr. Headlee's report had to do with the submission to the Eastern Plant Board of the National Plant Board's action at New Orleans, September 15, in respect to trade barriers. The first four items were adopted by the Eastern Plant Board. The fifth, having to do with duplicate invoices, was not acted upon, since it was a matter not pertaining to the Eastern Plant Board group. No state in that territory requires duplicate invoices at the present time.

At the New Orleans meeting of the National Plant Board favorable action had been taken on five resolutions presented by Henry B. Chase and Paul Stark, representing the committee on trade barriers of the American Association of Nurserymen, which were briefly as follows:

"1. Nursery inspection service shall only cover control of injurious insect pests and plant diseases, and shall not be used as a method of determining how nursery stock shall be merchandised or as a trade barrier.

"2. Eliminate out-of-state permit tags.

"3. Each state accept other states' inspection tag as final qualifications.

"4. Eliminate fees of out-of-state nurserymen and agents.

"5. Eliminate duplicate invoices."

At the New Orleans meeting, also, Mr. Stark discussed the holding up of shipments en route into certain states and expressed the opinion that action should be taken to speed up the delivery of nursery shipments by parcel post that were held up or sent to inspection points, the nurserymen being required to pay additional postage for forwarding to these inspection points. According to Mr. Stark's suggestion, the following motion was passed at that meeting:

"Moved, that the National Plant Board go on record as favoring changes in the postal regulations relating to terminal inspection of plants that would permit of plants or plant products destined to any state maintaining such inspection to be routed by and held en route for inspection at designated transit points in the state of destination without any requirement for additional postage."

LATEST figures show that there are 148 federal nurseries in operation, producing 401,000,000 plants, trees and shrubs.

WILT CAUSED BY WALNUTS.

The action of the walnut tree in producing a substance that is apparently toxic to rhododendrons and other ornamentals is discussed in the October issue of *Nursery Disease Notes*, issued by the New Jersey agricultural experiment station.

A case is cited in which a nurseryman cleared an area of land which was well drained and contained a rich loamy soil, high in organic content. However, there were five black walnut trees left on or around the edge of the clearing.

In this area *Rhododendron catawbiense*, approximately 9 years old, was planted. The plants were in a vigorous condition when moved to this area with a good ball of soil in the spring. The plants continued their healthy growth until the first week in July, when those growing in an area beneath the spread of the largest of the walnut trees started to wilt and eventually died. This wilting and subsequent dying spread until a major part of the plot was affected.

By late in August thirty-five per cent of the original 750 plants in the plot had wilted or died, and the remaining unaffected plants were removed to a plot several hundred yards away from the walnut trees, where they all continued to grow and gave no indication of wilting.

Some of the wilted plants were taken to the laboratory to determine if they were infected with a wilt fungus, but tests proved to be negative.

Examinations disclosed that injury occurred to those plants that were planted along the direction of the main roots of the walnut tree and the injury spread in fanlike areas from the main roots as they grew away from the trunk.

Similar experiences with other plants have been observed.

Soil tests indicated that the toxic substance does not remain in the soil for any great length of time, and that living roots were necessary to produce this toxic action.

WHEN birch leaves become sticky and finally fall, it is probably caused by honeydew drip, brought on by aphids' puncturing the leaf and releasing the sap, causing disintegration of chlorophyll and eventually drying of foliage.

AMERICAN ASSOCIATION OF NURSERYMEN

RICHARD P. WHITE, EXECUTIVE SECRETARY

636 SOUTHERN BLDG., WASHINGTON, D. C.

CONFER AT WASHINGTON.

From November 13 to 18 conferences were held with officials in various departments of the government at the national capital by Clarence O. Siebenthaler, chairman of the legislative committee; Paul Fortmiller and Paul Stark, members of the committee; Richard P. White, executive secretary, and several other members of the American Association of Nurserymen, including E. S. Welch, Lester C. Lovett and Herman Owen.

Conference with officials in the wage and hour division of the Department of Labor was held in an attempt to obtain clarification as to the classification of certain nursery employees. The government officials emphasized the fact that the administrator has no legal authority to make rulings beyond those specified in the law and doubtful points could only be cleared up by court decisions. Hence it is up to the individual employer to follow his judgment and "when in doubt, comply," to avoid the legal penalties of an adverse decision in the event of suit.

The classification of packing house employees was a particular point of discussion. Opinion was expressed that the "area of production" did not concern nurserymen, as exemption of their employees would depend upon the definitions of agriculture and production. If such employees handle stock grown by the nurseryman, whether or not on several widely separated tracts of land, they would be exempt. If most of the stock marketed is produced on the nurseryman's farms, the small amount of stock he purchases might be considered as "incidental" to his farming operations. At what point the volume would be large enough to be considered otherwise than "incidental" is one of the doubtful points on which only a court of law can render decision.

In a conference with officials of the social security unit of the bureau of internal revenue it was learned that the extension of exemption of nursery employees, such as office workers and those employed in

landscape work, is quite unlikely, particularly in view of the current talk that a bill will be laid before Congress to extend the application of the social security act to those classes of employees hitherto exempted. It was learned that approximately 2,500 claims for refunds had been received from nurserymen, of which probably several hundred have been paid up to this time. Those firms which took credit for their overpayments in making current payments apparently are better off than those which filed a claim on form 843. Those filing the form are being asked to answer in detail questions as to the nature of their operations. Since it seems impossible to obtain a change in the mimeographed form of the bureau, nurserymen must fill in the questionnaires as best they can, though a general statement revealing the nature of their operations may serve the purpose, without response to numerous irrelevant questions. Detailed advice on this matter, as well as on the wage and hour law interpretation, is given A. A. N. members through the association's confidential news-letter.

Conferences were also held with various officials in the Department of Agriculture, chiefly on the important subject of government competition through federal and state-owned nurseries. While some officials indicate their intention to avoid any interference with private producers of nursery stock, others defend the maintenance of government nurseries, denying that they compete with commercial growers.

Members of the prairie states have been asked the amount of stock available or the amount which they are in position to produce for the soil conservation service. Conference with officials of the service by Secretary White have revealed a willingness to cooperate, at least in the production of the stock needed for soil conservation work.

OFFER CHERRY TREES.

Newspapers at Washington, D. C., during the third week of November carried screaming headlines, columns

of news stories and editorials and many pictures about the protest of local society women against the removal of Japanese cherry trees around the tidal basin on the proposed site for the new Thomas Jefferson memorial. For days official Washington was disturbed. The women took shovels away from W. P. A. workers and chained themselves to the cherry trees. Delegations in protest visited government officials. Since the nation's capital has received widespread publicity each spring during the flowering period of the cherry trees, the protest was vehement.

Members of the American Association of Nurserymen in Washington at the time found a happy solution to the controversy. Richard P. White, executive secretary, with Paul Stark and Clarence Siebenthaler, called at the White House to offer the President 1,000 cherry trees to replace those destroyed. They conferred with the President's secretary, Marvin P. McIntyre, November 18, who gave the White House permission to make the offer official and lay it before Arno Cammer, director of the national park service. Announcement duly appeared in Washington newspapers. Since it will be a considerable time before the trees will be required for planting, the details of the proposal to replace the destroyed trees, when and if necessary, are to be worked out later.

STATE WAGE-HOUR LAWS.

Efforts by federal authorities to have enacted state wage and hour laws, at the national conference on labor legislation, at Washington, D. C., last month, have led to the approval of a model state law adapted from the federal act. The federal administrator is authorized to make grants of funds to cooperating state agencies to reimburse them for expenditures which they incur. At the present time fourteen states have enacted minimum wage laws and seven have adopted legislation limiting the work week to forty-eight hours or less. To qualify for

grants of federal funds, other states are likely to enact such legislation.

Federal authorities have two purposes in encouraging state legislation. One is to bring employees engaged in intrastate commerce under the wage and hour limits and to strengthen enforcement of the federal law through state coöperation. The second is to establish the minimum wage and maximum hour standards under state legislation, which could survive even if the federal law were found unconstitutional by the Supreme court.

The enactment of such state legislation would, first of all, affect the employees of nurserymen doing a retail business entirely within state limits, at the present time not subject to wage and hour regulations.

The second effect would be to extend the provisions of such regulations to employees of nurserymen through a revision of the definition of agriculture. The change in this definition, according to the draft of the model state wage and hour bill would limit agricultural exemptions such as the social security act regulations now do. The employees performing such operations as grading, wrapping, packing, etc., exempt under the federal wage and hour law, would not be exempt under the state law if the proposed changes stand. These changes may be seen in the following quotation of the federal act, in which words appear within brackets which are omitted in the proposed state bill:



E. Mike Dering.

"Agriculture" includes farming in all its branches and among other things includes the cultivation and tillage of the soil, dairying, the production, cultivation, growing and harvesting of any agricultural or horticultural commodities, the raising of livestock, bees, fur-bearing animals or poultry, and any practices (including any forestry or lumbering operations) performed by a farmer [or] on a farm as an incident to [or in conjunction with] such farming operations, including [preparation for market,] delivery to storage or to market or to carriers for transportation to market.

Each state organization should ascertain the possibilities of its state enacting a wage and hour law and, if so, offer coöperation with the state department of labor in drafting a definition of agriculture in order to prevent undue disturbances in agricultural employment and undue burden on the employer of agricultural labor. It is desirable that a definition identical to the federal act be obtained, so that employers of agricultural labor will be operating under the same regulations the country over. It is especially important that this effort be made in states likely to adopt a wage and hour law soon, as the first such law passed will probably be followed by other states in enacting similar legislation.

ARRANGING CONVENTION.

The committee on arrangements for the convention of the American Association of Nurserymen to be held at Portland, Ore., next summer, is composed of heads of some of the most prominent firms in the trade on the Pacific coast, from southern California to northern Washington. To acquaint a larger circle of A. A. N. members with these men whom they will likely see much of, if they visit the west coast next July, biographical notes about the committee members will be presented in these columns in the intervening months.

The chairman of the committee, E. Dering, known widely as "Mike," has the assistance, as a member of the committee, of his partner, A. C. Peterson, sometimes called "Pete." Still a youthful pair, they have established a national reputation for the rose plants their firm supplies the trade.

The firm of Peterson & Dering, Inc., Scappoose, Ore., was started in 1923 by E. Dering and two brothers, A. C. and E. C. Peterson. The three left their employment with the Villa Nursery Co., Portland, Ore., and began a nursery of their own. Today

the firm is under the management of E. Dering, who does the traveling and selling, and A. C. Peterson, who has full charge of the field work.

E. Dering, 32 years of age, was born at Petersburg, Ind., in 1906. His family moved to Kentucky when he was a couple of weeks old and lived there until he was 4. Mr. Dering's father was in the lumber business and continued in it after the family moved to Oregon from Kentucky. They lived in east Portland in a nursery center, and at an early age E. Dering began working for the Villa Nursery Co. There he met A. C. Peterson and E. C. ("Butz") Peterson, and a close friendship began between the three. He was married in 1933 and now has two small sons.

In 1923 E. Dering and the two Peterson boys decided to start on their own and planted 10,000 roses, a like amount of fruit trees and a small acreage of potatoes. A. C. Peterson remained with the firm just a few months and then decided to go east to Cleveland, O., to learn the printing press repair business. E. C. Peterson and E. Dering continued the growing and distributing of roses, and today the firm plants one million cuttings for budding. The nursery was located east of Portland for several years, but was moved to Scappoose in 1932, where the firm now has a large warehouse, an office and adequate storage facilities, on 125 acres devoted strictly to field-grown roses. The firm was incorporated in May, 1934.

E. C. Peterson handled the grow-
[Concluded on page 17.]



A. C. Peterson.

Varieties of Taxus

Hardy Forms of Yews Have Rapidly Developed Popularity of This Useful and Handsome Evergreen in This Country in Recent Years

In England one will find specimens of yews hundreds of years old, but the only place in the United States where yews of any great age will be found is in Virginia. This is due to the fact that the only varieties native to the United States are *Taxus brevifolia* and *Taxus canadensis*, and it was not until the English settled in Virginia that the yews of England and Ireland were brought to this country.

Most of the yews in Virginia and surrounding states are the English yew and its varieties, but in Richmond, Va., are two excellent specimens of *Taxus baccata fastigiata*, Irish yew. Among the varieties of *Taxus baccata*, English yew, are to be found forms with golden, yellow and silver foliage. These are all novelties that are not so valuable as the species itself with its dark green foliage, which borders on black.

Because of the rigors of the climate it seemed that there might not be a yew that would survive in the northern section of the country, but in 1861 Dr. George K. Hall introduced *Taxus cuspidata* from Japan, and this variety has proved to be hardy. This yew, because of its late introduction and the slow development of the nursery trade, did not become popular until recently, but now the supply can hardly keep up with the demand.

Taxus cuspidata has its species, but the naming has become confused until it is not certain just what the varieties are. *Taxus cuspidata nana* has been listed as *Taxus brevifolia* for so long that it is almost impossible to change the name of this dense, slow-growing variety to its correct form.

Confusion and difference of opinion in parentage of different hybrids is also evidenced. *Taxus media Hicksii* is generally believed to be a hybrid between *baccata* and *cuspidata*, but the introducers say it is a horticultural form of *cuspidata*. A *taxus* of obscure origin is *Taxus intermedia*, which for some time was known as an improved form of *cuspidata*. There are many other forms that have shown up in seedlings and have caused a rather confused tangle.

Ease of culture and tolerance to soil conditions make the yew an excellent plant for landscape plantings. The scarlet berries, on the female of the species during the late summer or autumn, add to the attractiveness of the dark green foliage. The *taxus* is practically immune to insects, with the exception of the black vine weevil larvæ, which may do considerable damage to the roots, but this insect is easily controlled by treating the soil with arsenate of lead.

Propagation of all *cuspidata* varieties is by cuttings taken during August and put in airtight coldframes, using a mixture of equal portions of sand and granulated peat moss. When the roots have become large enough, usually about June or July, it is best to pot them in small pots and put back in the frame until the second spring, when they may be lined out.

When propagating *taxus* one should remember that unless terminal cuttings are taken from upright varieties the resulting plants will be of the spreading type. Because of this fact, most of the upright yews are grown from seeds.

Peter M. Koster, of Bagatelle Nursery, Huntington Station, N. Y., speaking on the nation-wide garden club broadcast over station WOR recently, said: "For many years nurserymen have attempted to find a hardy seedling which could take the place of the Irish yew in our gardens. As far as I can judge, the chestnut yew, *Taxus baccata cheshuntensis*, which originated in Cheshunt, England, as a cross between the type and the Irish yew, is the nearest approach. It was not damaged in this country during the severe winters of 1934 and 1935.

"The Canada yew, *Taxus canadensis*, as the name indicates, grows even in Canada. It does not reach a height of more than three or four feet as a rule, and it does well in cool, moist soils in the shade of hemlocks and pines. It is sometimes used as a ground cover. In the winter it may change its color in exposed situations to a russet hue, which many people do not find attractive."

SOIL CAUSES TAXUS WILT.

A dieback of large *Taxus cuspidata* plants has occurred in several New Jersey nurseries during the past two months, according to a report in Nursery Disease Notes for November, 1938, issued by the New Jersey agricultural experiment station.

The situation is first evidenced by the plant's turning yellow at the growing tips, followed by a general yellowing, and finally the entire plant wilts and dies. This entire procedure may take several months to complete.

While appearances indicated that the plants might be affected with *taxus* weevil injury, no girdling of the stems was found. Examination of several 10-year-old plants and some younger ones showed that the trouble originates in the roots, where the cortical tissue was decayed and sloughed off readily, but the roots growing nearer the soil surface showed no evidences of injury.

Specimens of this tissue planted in sterilized media failed to yield consistently the same fungus, and roots of young healthy plants inoculated with the same tissue failed to become infected. Tissues from the branches and tips failed to produce a parasitic fungi when planted.

Investigations have given evidence that the dieback is associated with unfavorable soil conditions, because every case of severe injury was found in soils of pH 5.4 or pH 4.7, which is decidedly acid. Heavier or more poorly drained soils seemed to be more conducive to the wilt. In one nursery *Taxus cuspidata* of the same age and from the same source was grown on two different types of soils. At least twenty 10-year-old plants, of those on the poorly drained soil, died or showed various stages of the disease, while all of the plants on the good soil survived.

Removal of plants from affected soil to a more favorable location seemed to check the infection.

Taxus plantings in other nurseries substantiate the conclusion that it prefers a well drained soil with an occasional application of ground limestone and will not thrive in heavy, wet acid soils.



Charlie Chestnut



Tells Interesting Facts about Business

The Civic club in Riverbend asked me to give a paper at the October meeting on interesting facts about the nursery business. We had a series along that line. Last month we had interesting facts about bein a ice man by Hod Williams and before that we had the interesting facts on bein a horse doctor. So my turn come and the president asked me to give a paper. In case there is any nurserymen which has to give papers to there Civic Club they is welcome to use the interesting facts which I have made up. Here is the paper just the way I give it:

Gents: It is a great honor to give this here paper to the different members. Some of you has been out to the nursery, but I would like to see more of you out there to buy stuff. (The president called me on that sentence afterwards, but I figgered to get in a little free advertising.)

Lots of the members thinks all they is to the nursery business is planting bushes and takin them up again and selling the bushes. Of course that is one of the parts of the nursery business, but that aint all.

Only this A.M. a lady called and says my maple tree is covered with a lot of worms with big red eyes and they are crawling all over everything. She wanted me to come and take the bugs away at once. I went down and sneaked up on a couple of worms and took them home in a paper bag. Then I looked em over with a magnifying glass and a microscope. You cant be too careful with worms. I looked the worms up in a lot of books and got the name of the worms but as it was a long name and the members couldnt pronounce it anyway there aint no use to give the name. Then we have got to make up a spray with a lot of drugs and medicine and go up and spray the worms.

That is one reason why any tom dick and harry cant be a nurserymen on account of you have got to be up on the over 6000 kinds of bugs and worms and find out what to spray on em to keep them from crawling over the bushes. I claim that is one of the reasons why the nursery business is interesting on account of the bugs.

Now take it on growing stuff. Sometimes you can grow a tree if you can get some seed but mostly the seed aint no good after you get it. Sometimes you can grow it if you take a cuttin and put it in the ground. But generally the cuttins dont grow if the summer aint real wet and as all the members know you cant tell nothin as to how the summer is going to be.

They is some nurserymen which grows stuff from grafts. That is a tricky way and not many nurserymen knows how to make a graft. Then there is a way to grow stuff from buds but that takes a pretty slick nurseryman too.

Most of the nurserymen dont grow nothing hardly, but makes trades with other nurserymen. If you are a nurseryman down south you go out on a farmers land and you pull up all the trees you want for nothin and then you trade them with some other nurseryman for some other stuff which he has traded with some other nurseryman. One time I checked up on a lot of trees that had changed hands 14 times when we got it. The trick is to get the best of the bargain and that is what makes the nursery business so interestin. You have got to be wide awake all the time to get the best of the trades. That is what we call the propagating department.

A fellow at the F and M Nursery was telling me last spring of a trade he got into and after five or six trades he got his own stuff back at about 10% of what he sold it for in the first place.

Most of the trades start at the convention. When the nurserymen aint got nothin to do they will sit in the lobby of the hotel and trade stuff back and forth. One time I seen a car of lombardy poplars change hand four times in ten minutes and the same guy got his poplars back with a thousand roses throwed in. I could tell a lot of deals on trades that I have run on to in my time but then I wouldnt have no time to tell about the other interesting things in the nursery business.

Now take the landscape department. That is where a lady calls up and says how much will it cost to put

a mulberry tree by the hen house and two spireas in front of the barn. You go down with a paper and a tape measure and you measure it all out. Then you go home and draw it out on a paper. If you are a high class landscaper you color the barn red and color the trees and the grass green. Generally when a landscaper aint making it go you will find he has been cuttin down too much on the colored pencils.

Then you take the plan back to the lady and tell her the job will cost 18.50. "My goodness, aint you folks awful high?" she says. "I was reading in the mail-order catalog where I can get 2 spireas and a mulberry for only 49c post paid for the lot." Then you have got to argue with the lady and finally you agree to put in the job for \$3.00, and guarantee it for three years for nothin.

Another thing it helps if the landscaper will send to a male order house and get a pair of high top boots and a pair of army officers pants. It adds dignity to the nurseryman and they wont mistake him for a WPA worker if they see him with a shovel. It takes a lot of high class talent to put on a landscape dept. and thats what makes the nursery business so interesting. I tell you any ordinary mill run farmer cant do it, but there is a lot of em trying to get by.

The male order dept. is a good thing to have in any nursery. Generally you can work off anything that is too runty for the cash and carry dept. or the landscape dept. In the winter you make up a lot of packages of different odds and ends and pack them in some shoe boxes which you can generally pick up for nothin. The best price to sell at is 79c. You can put any thing in the box that is laying around the nursery.

I know one nurseryman that makes a good living by hanging around the convention and buying up all the stuff that nobody wants and then he sells it for 79c. He has changed his location every year so he dont get a lot of useless correspondence from different people asking foolish questions and making complaints about the fancy stuff that turned out to be asparagus roots and wild cherry roots. But it is a interesting department and most every nurseryman has one someplace around either under his own name or some phony name he made up.

There aint hardly any good up to date nursery that dont have a good agent department. Farmers which has moved in off the farm or preachers which has give up preachin makes the best agents. They aint too fancy and the people like to deal with somebody that dont go in for wearing a necktie and all that fancy stuff. They just drop in, in a friendly way and sell the lady a bleeding hard for 20c and then wind up by talking the lady into a cherry tree and a Irish Juniper.

Agents is all right in a way if you can get one that aint too mouthy and knows how to get around the mail order nurseryman. That is the worst part of it, when you are a agent and have to argue about the male order. In the old days the agents used to send in a order now and then when times was bad with a phony name off a grave stone in the cemetery. But as I say that is one of the reasons that the nursery is an interesting business.


The cash and carry department or the road side stand or sales yard as some calls it is one of the things that makes the nursery business interest-

In the road side stand you can sell concrete alligators and toad stools and dwarfs, and candy bars and cigars and all kinds of pots and jars and that. One of the bad features to the road side stand is the way people come just as you are starting for the lodge meeting or have got your overalls and your boots off readin the paper in the evening. They never want what is in the stand but you have got to go out with a lantern into the nursery and dig up what they want. The women is the worst. You cant tell em nothin as they dont know what they want when they see it, and they never want to pay what you ask. We have got a rule out to the nursery to ask \$1.50 for any tree and then we can come to 75c and everybody is satisfied.

In the cash and carry you will find a lot of stuff in baskets and tubs and boxes, but the chances are you dont want any of the stuff which the nurseryman has got out anyway so it dont hardly pay. I know one nurseryman who got so much stuff in boxes and pots on hand that he had to put in a filling station and give away a bush with a gal. of gas. He figgers that in about 4 years he will give enough away to clear out his land so he can begin again in the nursery

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business. The cash and carry has got a lot of good points and it sure makes the nursery business interestin.

There aint hardly a nursery that amounts to anything that aint got a wholesale department. That is where a nurseryman comes in and the conversation generally starts like this: "One of my men has sold 6 Blue Spruce about 4 feet. He sold them too cheap but it is for a good customer and I have got to fill the order. They dont have to be perfect so I can use some seconds. What could you let me have them for." Say you had in mind gettin \$7.00, so you tell him you can have some of the lop-sided ones for \$4.00. "That's more than I sold em for but I will take em because I have got to fill the order. Maybe I ought to mark the trees so they will all look about alike." Now thats where the trouble comes in. You go out in the nursery and the best of the trees is none too good and he marks them all 6 feet and up. You thank him for the order and he goes back home. Probably he sold the trees for \$25.00 each at least.

That is what you call the wholesale department and its one of the depart-

ments that helps to make the nursery business so interesting.

Now take the big tree moving department—well I see quite a few of the members is edging out of the meeting so I will not tell no more. However there is a lot of other interesting departments which I could tell about if the members want to hear.

The president asked the members if they wanted to hear anymore and nobody said yes so there wasnt nothin for me to do but to sit down. Anyway I figger I done the nurserymen a good turn when I told all the interesting points about bein a nurseryman.

NEW NURSERY LIST.

[Continued from page 4.]

clipping it may make an excellent low hedge and by budding it onto stems of *Crataegus Oxyacantha*, eighteen to thirty inches in height, it makes an excellent standard for planting in formal areas. It is a fine shrub for espalier use on low walls.

A shrub of the upper south, *Dier- villa sessilifolia*, southern bush honeysuckle, is often considered somewhat of a weed because of its spreading habit. This tendency, however,

lends it to use for mass planting on rough banks, such as highway cuts and fills. Its drooping habit of growth, glossy foliage and yellow flowers are its outstanding characteristics.

As a marked contrast with other species, *Hydrangea quercifolia*, the oakleaf hydrangea, has large lobed leaves and brown woolly twigs. As a shrub, to give a variation of foliage in the shrubbery border, it is well suited. Besides its large size, the underside of the leaves is white, woolly, which becomes noticeable in the wind. The flowers are borne in large upright panicles, white at first, but becoming pinkish or often purplish with age. With the shrub unattractive as the flowers fade, it is advisable to remove the flower clusters as soon as the blooming period is over. In exposed situations and during unusually cold conditions, the oakleaf hydrangea may be injured, but when the variety is in well drained soil, part shade and semi-protected situations one may be sure that it will prove satisfactory. Ample water should be provided during the growing season, but withheld in early autumn to allow the plant to become thoroughly hardened before cold weather occurs. Little pruning will be required if it is given satisfactory conditions. The purplish brown autumn foliage color is especially attractive. The oakleaf hydrangea is much to be preferred over the more common *H. arborescens grandiflora*, Snowhill hydrangea, which is a loose grower and bears foliage which is not especially attractive. The common greenhouse hydrangea, which can be made to produce blue flowers, is not sufficiently hardy except in well protected situations or along the sea-coast.

Hypericum prolificum, the shrubby St. John's-wort, is so common that it needs little further attention. While this species is not so good as *Hypericum Kalmianum*, which was discussed in the last article, it is the most satisfactory of those coming within this size group and is prized for its yellow flowers and ability to stand a wide variation of soil and environmental conditions.

Few of the honeysuckles come within this size group, but of the few, *Lonicera thibetica*, Thibetan honeysuckle, seems the best. Growing to a height of four to five feet with drooping, sometimes prostrate branches, bearing small leaves, dark green above

and white hairy beneath, this shrub is fine for bank planting and for planting on tops of walls where the drooping branches are especially effective. The pinkish purple flowers in early to mid-May are showy. Other *Loniceras* coming within this size group and considered inferior are: *L. canadensis*, *L. caerulea*, *L. oblongifolia* and *L. trichosanthes*.

Philadelphus Lemoinei and *P. microphyllus* are the only two common species of *philadelphus* that come within this group. *Philadelphus virginialis* is usually larger. Of the various varieties of *P. Lemoinei*, *Avalanche*, *erectus*, *Girandole* and *Mont Blanc*, the first is my choice. The comparatively compact and narrow, upright habit of growth of *P. Lemoinei* and many of the varieties lends a more refined habit of growth to this plant than characterizes most of the other species of *philadelphus*. *Avalanche* is somewhat more drooping than the species and bears fragrant, white flowers abundantly.

Rhus canadensis, fragrant sumac, is a shrub especially adapted for covering rocky slopes. In addition to its somewhat prostrate habit of growth, its early yellow flowers, red fruits and red autumn foliage color are its outstanding characteristics.

The mountain currant, *Ribes alpinum*, is one of our best shrubs for dry shady conditions. Besides being excellent for mass planting, as individual specimens, it makes an excellent dwarf hedge. This shrub should be grown and used where possible. The mountain currant is definitely superior to *R. cereum*, *Cynos-*

bati, *pinetorum* and *vulgare*, which are also in this group, as a desirable landscape plant.

Few of the species roses are worthy of extensive use in landscape planting. The Virginia rose, *Rosa lucida*, is one of the few exceptions to this statement. The glossy, green foliage which holds late, the pink flowers in June and the red fruits commend this rose to rather liberal use, especially for mass and bank planting.

Spiraea arguta, *multiflora* and *Thunbergii*, all bloom at much the same time, but there is a slight difference in earliness. *Spiraea arguta*, the garland spiraea, is the first to bloom and the most useful of the three for landscape planting. Its superiority over *S. Thunbergii*, the Thunberg spiraea, lies in its greater hardiness, more abundant bloom and its more attractive fall foliage color. It is also somewhat larger in size, usually reaching about five feet, while *S. Thunbergii* seldom exceeds three feet.

Spiraea multiflora, the Snowgarland spiraea, has been grown in the northwest for some years and is apparently hardy in that district. The plant resembles *Spiraea arguta* with its small leaves and white flowers produced before the leaves. This plant has arching and drooping branches which make it a pleasing specimen. It may be used in the border or as a foundation planting. Trials at Columbus, O., show it to be a somewhat smaller plant than *S. arguta*, but good in bloom.

The dainty foliage of all three of



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these types makes them especially useful for combination with other shrubs in border planting. *Spiraea arguta* is the best for foundation planting.

Spiraea Bumalda Froebeli, *Froebel spiraea*, is well known as the best, or one of the best, of the pink-flowering spiraeas.

As one of the parents of the much-overplanted *Spiraea Vanhouttei* it is difficult to understand why *Spiraea Reevesiana*, *Reeves spiraea*, has not been more popular. It is definitely better than the *Van Houtte spiraea* in habit of growth and foliage and equal or better in flower, as the old flowers drop soon after fading. Its somewhat more tender character may limit its use in some sections.

Other spiraeas which come in this group and are considered inferior to those on the "preferred" list are: *S. Blumei*, *chamaedryfolia*, *japonica* and variety *ovalifolia*, *Fortunei*, *latifolia*, *trilobata* and *tomentosa* and its variety *alba*. Most of these at one time or another have been common in the trade. One that has not is *Spiraea Blumei*. This species is an attractive specimen of about five feet in height. The leaves are about an inch in length, ovate in outline, and dark green, borne on spreading, arching branches, at maturity the plant becoming almost as wide as high. The flowers are white and borne in many-flowered clusters in June. As a specimen or for borders this plant may become important after more extensive tests.

Except for its white fruits, which are uncommon for our shrubs, *Symphoricarpos racemosus laevigatus*, garden snowberry, would not find a place on our selected list. It has few other characteristics to commend its use.

Viburnum Burkwoodii, *Burkwood viburnum*, the new semievergreen vi-

burnum, has been mentioned previously as one of our more promising shrubs. It is of more vigorous growth than *Viburnum Carlesii*, bears much smaller leaves, but almost identical to it in flower. The flowers are pinkish white and fragrant. Both plants produce their first blooms the latter part of April and continue to be attractive for about ten days to two weeks. I am convinced that *Viburnum Burkwoodii* will become an outstanding favorite as soon as it is better known.

Viburnum Carlesii, fragrant viburnum, is now one of our common shrubs. Its value in landscape planting, if it is given good cultural conditions, cannot be overestimated. While it may reach six feet or more in height and perhaps twice as wide, it is usually somewhat smaller. One has only to imagine a specimen of such size with snowball-like clusters of pinkish white flowers or with its satiny-like, grayish green leaves to realize its value. Unfortunately it has not stood the past hot dry summers too well in Columbus and the foliage has become rather susceptible to a leaf spot disease.

Viburnum acerifolium, the maple-leaf viburnum, is an excellent shrub for shade planting, but does not find sufficient universal use to warrant a place on our selected list. *Viburnum bitchuiense*, the Yeddo viburnum, is similar to *V. Carlesii*, but it has not had extensive trial as yet.

The next article of this series will discuss the medium-size shrubs, six to nine feet in height.

A LIVING sundial of yews stood for two centuries at Wentworth castle, England. The pin was a carefully pruned yew tree and the figures were cropped box bushes.

ARRANGING CONVENTION.

[Concluded from page 12.]

ing until January, 1937, when he died of pneumonia, while at Omaha, Neb., on his first business trip. At his death his brother, A. C. Peterson, took over his duties and is again associated with the firm.

A. C. Peterson, 37 years of age, was born at Pasadena, Cal., in 1901. His family moved to Portland while he was still quite young, and he and his brother began working for the Villa Nursery Co. After being in Cleveland for nine years, Mr. Peterson returned to Portland and established a printing press repair business, which he sold to a partner when he rejoined the firm of Peterson & Dering, Inc., in May, 1937. He is in full charge of the growing and enjoys the work much more than he did his previous occupation. Mr. Peterson was married in 1932.

FRUIT OUTLOOK FOR 1939.

The average production of all fruits during the next five years probably will be larger than the average for the 5-year period just passed. Marked increases are expected in the production of grapefruit, oranges and lemons. More moderate increases are in prospect for pears, peaches, plums and prunes. The bearing acreage of grapes is sufficient at least to maintain production on the present high level. The trend of apple production probably will be downward at a moderate rate. Material changes in the production trends of other fruits are not expected, according to the bureau of agricultural economics of the United States Department of Agriculture.

Test Mulches

Characteristics of Winter Coverings Disclosed by Experiments at Cornell

In recent tests conducted by the Cornell University experiment station with various mulches for perennials it was found that glass wool was most effective in this use. A thickness of two inches appeared to give the best results. The experiments showed, further, that the light which the glass wool allowed to be transmitted was of great value, especially to plants that keep their leaves through the winter. These plants maintained their green color, and no dead or rotting leaves were found.

Further experiments showed that the removal of snow from the plots to be mulched resulted in injury to the plants. The snow acted as an insulator and decreased the fluctuation of temperature. The results of the various other mulches were as follows:

Oat straw proved to be of slightly more value than other types of straw, but it contains a considerable amount of weed seeds. Temperature fluctuations were greatly reduced and the soil averaged higher temperature than under other mulches. Oat straw was used to the depth of six inches.

Excelsior, used to a depth of five inches, was less effective than any other mulch material. It lacked insulation value and the temperature fluctuations were somewhat greater than under other types. Soil conditions were good and there was no tendency for the soil to become soggy.

Fresh, strawy horse manure, used to a depth of four inches, was not much better than excelsior and permitted some fluctuation in soil temperature. The soil remained wet throughout the winter.

Six inches of leaves proved to be good insulating material and there was little or no fluctuation in temperature. The effect of the leaves on the plants was detrimental in that moisture seemed to condense on the lower leaves and resulted in a soggy condition.

A one-inch layer of balsam wool was a poor insulating material as compared with other materials used, and being backed with black waterproof paper, it was completely impervious to light and moisture and the

soil was wet. Nearly 100 per cent of the plants mulched with this material died.

A one-inch thickness of burlap seemed only to prevent heaving of the ground. The soil froze and thawed much the same as if no mulch was used.

Peat moss, used at a thickness of three inches, proved to be one of the most effective mulches. It prevented fluctuations in temperature and in some cases decreased winterkilling, but it was somewhat detrimental to foxgloves and campanulas.

JUNIPER SEEDS.

When collecting and harvesting seeds of *Juniperus scopulorum* and *virginiana*, it is important that the collector be certain that the fruits are well matured. Seeds of the juniper, which have a fleshy or pulpy covering, are usually ready for gathering when the coats become well colored or soft.

The seeds are cleaned by mashing the coat and allowing them to ferment for a few days in water. By this time the poor seeds and the pulp will float to the top and separation of the seeds is relatively easy. It must be remembered that usually the poorest seeds fall to the ground; consequently, seeds should be gathered from the tree.

All seeds should be cleaned of any adhering covering or other foreign material before stratification. It is also best to disinfect the seeds before stratification, which can be accomplished by washing the seeds in a five to ten per cent solution of potassium permanganate. Seeds of *Juniperus*

virginiana should be examined, and those that show large infestation by larvae discarded.

The seeds will germinate better if kept stratified, accomplished by mixing the seeds with an equal amount of moist peat or sand and keeping at a temperature of 32 degrees. This is usually done in February.

The seeds may be planted in the autumn or spring, in rows about six inches apart in flats or boxes, in which the soil should be fine, mellow and preferably a little sandy. Cover the flats with pine needles or a light straw mulch and keep moist but not wet.

Seed beds are best covered with lath shades, as the seeds germinate better in total darkness than in sunlight, and, too, the laths will keep the rain from packing the soil. As the seedlings grow, the laths must be raised to prevent interference with the young plants.

Watering of the seedlings is an essential operation, and a thorough soaking operation is desired, making sure the water reaches down to the roots of the seedlings. Late afternoon or evening is the best time to water in order to prevent burning of the leaves.

It is desirable to retain the moisture of the seedling beds by using a light mulch of peat or sand.

Seeds are usually planted thickly to insure a good stand; therefore, it is often necessary to thin out the seedlings to ensure proper growing conditions.

Transplanting takes place when the seedlings are 2 or 3 years old, before new growth starts.

WALNUT PROSPECTS.

Severe frost damage to nut crops in Great Britain indicates that there will be an exceptionally good demand for American walnuts in that coun-

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KOSTER COMPANY, Inc.

KALMIA LATIFOLIA	100 rate	1000 rate
12 to 15 ins., B&B.....	75c	60c
15 to 18 ins., B&B.....	90c	75c
RETINISPORA PLUMOSA AUREA		
4 to 6 ins., 1-yr. tpl.....	10c	8c
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BRIDGETON, N. J. Write for catalogue.

NURSERYMEN—ATTENTION

Strong field clumps.

Pink Cushion, \$5.00 per 100.

Red, White, Bronze, \$8.00 per 100.

YELLOW CUSHION, smaller clumps,
\$8.00 per 100.

WONDERLAND NURSERIES, Ellerson, Va.

HERBS

Pot-grown plants: over a hundred varieties.
Dried Herbs for Flavoring and Fragrance.
Other plants of unusual character and
with the charm of old-time gardens.

New Catalogue sent on receipt of 10 cents.

Weathered Oak Herb Farm, Inc.
BRADLEY HILLS, BETHESDA, MARYLAND

try. The bureau of agricultural economics reports that prospects for American walnuts in northwestern European markets during the 1938 and 1939 shipping season are better than for several years. The small walnut crop harvested in Europe this autumn is the reason for the bright outlook.

The European walnut crop for 1938 is estimated at 1,595,000 bags, a decrease of 310,000 bags from the 1937 and 1938 season. The European exporting surplus is also expected to be considerably lower. However, central European countries and Germany will be well supplied by the crops in the Danube basin and Turkey.

DISPLAY STATIONS.

A method used to display stock by a Canadian nursery might well be adopted by American nurserymen. Brookdale-Kingsway, Ltd., Bowmanville, Ontario, maintains two display stations, one at Bowmanville and one near Toronto, which are well stocked with varieties grown at the nursery and arranged in a manner which will give the public an idea of their usefulness. Salesmen are on hand at all times to show the materials and to take orders. The public is invited to visit the stations frequently to see the changes the various seasons bring about in the plantings.

OSAGE ORANGE FENCES.

The good old days when nurserymen sold young Osage orange trees to make fence posts were recently recalled by W. J. Smart when, on his travels for the D. Hill Nursery Co., Dundee, Ill., he saw in the Bloomington Pantagraph an illustrated account of the harvesting of fence posts from two acres of Osage orange trees on a farm near Yuton, Ill. Set out seventy years ago by the father of the present farm owner, the trees have yielded three harvests at intervals of twenty to twenty-five years and an annual return of \$6 or \$7 per acre.

In the early days Osage orange trees were set out and trimmed so that the branches would interlace and make a stock-tight fence. But the labor of trimming, the space they occupied and the mending required as they grew older caused them to disappear, giving place to barbed wire and electric fences.

FRUIT TREES

**GROWN BY VIRGINIA'S
LARGEST GROWERS**

In an assortment of varieties and sizes. Grown so that you can safely handle, and priced so that you can afford to handle.

APPLE—offered in the following varieties:

Albamarie Pippin	New Red Jonathan
Ben Davis	New Red Rome
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Fall Pippin	Paragon
Grimes Golden,	Smokehouse
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Jonathan	Summer Rambo
King David	Sweet Paradise
Lady	Turley
Lowry	Wincaap
M. B. Twig	Yellow Delicious
Mother	Yellow Transparent
New Red Delicious	York Imperial
New Red Duchess	

PEACH—We offer 500,000 Peach in a large assortment of varieties and in various sizes at considerably reduced prices.

Send us your Want List for quotations and receive a copy of our New Low Fall Price List offering a large assortment of both Fruits and Ornamentals.

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We specialize in

APPLE AND PEACH TREES

Strawberry, Asparagus, Raspberry and Blackberry plants.

Grapevines, 1 and 2-year.

OUR MANY YEARS' PRODUCTION EXPERIENCE COMBINED WITH OUR FAVORABLE LOCATION ENABLES US TO OFFER STOCK THAT MUST PLEASE AT PRICES YOU WILL APPRECIATE.

Submit your definite list for quotations.

BOUNTIFUL RIDGE NURSERIES

Princess Anne, Md.

The Westminster Nurseries

WESTMINSTER, MARYLAND

Surplus Bulletin just issued. Lower prices on Evergreens, Deciduous Trees and Shrubbery, Barberry, Thunbergii, green and red; Evergreen Barberry, Glossy Privet, California Privet, Lining-out Stock, 2-yr. Budded Apple. Large supply of Peach Trees—Hale Haven, South Haven, etc.

It would be to your interest to have our Bulletin. We will mail on request.

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Complete assortment of lining-out sizes Also larger grades for landscaping Send for our wholesale catalogue

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EVERGREEN SPECIALISTS

Largest Growers in America

Box 402

DUNDEE, ILLINOIS

Winter Protection

Preparing the Perennial and Evergreen Plantings for the Trying Months of Cold Weather Ahead

For a number of weeks, the weather conditions over much of the country were truly remarkable, far more suggestive of early summer than late fall, before the present cold arrived. Plants encouraged by the unseasonable warmth have in many cases started to make a soft late growth and will, no doubt, be killed back to some extent. It is most unwise to do any winter covering while the ground is soft and warm. In the case of herbaceous perennials, too early covering means heavy losses from rotting, especially in the case of certain biennials like digitalis and Campanula Medium. A few plants like Anemone japonica, which are naturally a little tender, are better well mulched now.

In the case of kniphofias (tritomas formerly), cut the tops back well, put some coal ashes over the crowns and mulch thoroughly if the plants are on well drained ground. If water will lie there in winter it will be better to lift the roots and store them in dry soil in a shed, cellar or coldframe. Any plants of rather doubtful hardiness should be lifted now and stored in coldframes, where also should go chrysanthemum stock plants and other hardy perennials needed for propagating purposes. With some growers, double daisies, myosotises, aubrietias, lithospermums, ethionemas, incarvilleas and even violas and pansies come in this class.

Perennials, except stock planted in late summer or fall, need little or no winter mulching; in fact, many kinds, like established irises, peonies, phloxes, dictamnuses and others, are just as well without it. If one was sure that snow would lie on the ground right through the winter, mulches would not be needed, but alternate freezing and thawing heaves plants out of the ground badly and makes mulching a necessity.

As a general rule, more broad-leaved evergreens are harmed than benefited by winter protection. Many are wrapped up in burlap and then uncovered too early or during warm clear weather, when the extreme change from semi-darkness to intense light causes them to burn badly unless they are kept well sprayed for some time. Protection from strong winds or drafts in winter is desirable by means of burlap or evergreen screens. Overhead covering is often much overdone. All that the plants should have is a diffusion of light. More evergreens are ruined by excessive overhead covering than anything else. This applies to such subjects as rhododendrons, pierises, boxwoods, leucothoës, mahonias and evergreen azaleas.

Rhododendrons need a generous mulch of leaves, which should not be removed during the summer, as is too often done. Where the soil may be dry before winter sets in, it is important to soak the roots of evergreens, especially those around homes, where many die each year from drought rather than cold. Once they go into winter with dry feet, provided the ground stays constantly frozen until spring, there is likely to be many deaths among

the cheaper and often overplanted arbor-vitæ, chamæcyparises and junipers.

Mulches are of various kinds, and certain varieties, like salt marsh hay and cranberry tops, which are no doubt two of the best, are only obtainable near salt water or in sections where cranberries grow. The last-mentioned mulch is the finest of all. The tops tie themselves together, look neat, are light, give the necessary air and need no boards or other material to hold them down. Salt marsh hay carries no weed seeds, but must be held down to prevent it from blowing away. It is good for two seasons.

Leaves, especially oak or beech, answer well if light boards, cornstalks or similar things are used to hold them in place. Pine needles where obtainable in quantity make an admirable winter covering. Excelsior is sometimes used; it is light and porous, but must be held in place. There are other materials like glass wool, which is used by amateurs and is certainly worth at least experimental tests by those in the trade. All of these mulches should be obtained in advance of severe weather and applied after the ground is hard frozen. Often the old tops, if free of insects and disease, on the perennials suffice in themselves if scattered over the plants. Evergreen boughs where obtainable easily make a good mulch in themselves and are useful in holding down lighter materials like leaves or straw.

A HARDY AMARYLLIS.

Bulbs of Lycoris squamigera (Amaryllis Hallii) can be planted in fall as well as spring. This attractive member of the amaryllis family is rather unique in its habits and deserves greater attention than has been given it in recent years. Indications are, though, that interest in it is gaining, mostly among amateur gardeners. But how will the supply be when the demand develops?

This lycoris is known by a good many common names, most of them quite apropos. Hardy amaryllis and cluster amaryllis are suitable, since this plant is perfectly hardy over most of the United States and the flowers appear in clusters, but resurrection lily seems to

catch the interest of gardeners best. This name, too, is appropriate, since the leaves are produced in spring, dying about July; then in August a leafless flowering stem (scape) develops, carrying a cluster of rosy lilac, lily-like blooms, which invariably attract attention in the garden at that season.

Since the scape grows to a height of two to three feet, the bulbs are best planted among other plants bearing foliage at that time of the year, such as in the background of a perennial border or among low-growing shrubby subjects. A variety of the species, purpurea, with royal purple flowers, is more attractive than the type to many persons. Lycoris sanguinea, a species with reddish orange flowers, is equally hardy and can be handled in the same way as squamigera.

WHAT IS TEXAS BLUEBONNET?

There has been much confusion regarding the identity of the Texas bluebonnet, but the recently issued Garden Dictionary gives the botanical name as Lupinus texensis, stating further that it is the state flower of Texas. Because of the confusion regarding the identity of this plant, the writer has on several occasions questioned persons from Texas about the plant and they have always described it as having pea-like flowers, which would be right for the leguminous lupine.

Heretofore, most of the literature has inferred that the Texas bluebonnet is a gentian-like plant. Eustoma Russellianum has often been considered the Texas bluebonnet. However, in Texas this plant is called a bluebell. Seeds of both are often sent out erroneously named.

Lupinus texensis is an annual, and the seeds should either be started in pots in late winter or early spring and the plants later transplanted to the field or else the seeds should be sown outdoors where the plants are to flower as soon as danger of frost has passed and the ground is workable. Being a legume, the bluebonnet will not likely transplant easily; hence, the necessity of handling the seedlings in pots or planting the seeds where the plants are to bloom.

An inquiry was recently referred to the A. & M. College of Texas, College Station, and the following reply was received from F. W. Hensel, head of the landscape art department:

"There are two plants commonly

A Cost Sale to Clear a Block NORTHERN PECANS

Some beautiful high-headed 8 to 11-ft. Pecans. They are Greenriver variety, the best bearer of all the Northern Pecans. Trees left over from planting my 50-acre orchard in Philadelphia climate. Variety native in Ohio valley. Perfectly hardy at Buffalo and in Connecticut. To clear block am selling at cost of digging, handling and material, plus 10 per cent—\$4.15 per tree, balled and burlapped; \$2.15 bare root. F.o.b. cars Round Hill, Va.

Terms 25 per cent with order, balance eight draft BL attached

Good Only for Shipments This Fall.
Nothing Doing in the Spring

Also a few large Burlington Hybrids (Pecan and Shagbark) and McCallister Hybrids (Pecan and big Shellbark).

SUNNY RIDGE NURSERY

BOX AN SWARTHMORE, PA.

BARGAINS!
BARGAINS! **BARGAINS!**
HEDGE STOCK
Barberry! Barberry! Barberry!
Privet! Privet! Privet!
Yew, Hemlocks or What?
We have it!

800 acres raring to go! Fine stock, nothing better! Wholesale quantities to dealers only. Special prices on carloads at nursery. It will pay to investigate!

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Rocky Hill, Conn.

TAXUS

Taxus cuspidata, propagated from cuttings of the improved dark green strain. XX, B&B, 15 to 18 ins., heavy, from beds, ideal for dwarf hedges.

\$60.00 per 100, \$550.00 per 1000

TAXUS HICKSII, 18 to 24 ins.

\$65.00 per 100, \$600.00 per 1000

Juniperus Depressa Plumosa—

Juniperus Pfitzeriana

Write for quotations.

Above prices in lots of 100,
f.o.b. Cincinnati.

We also have larger *Taxus*, including trimmed specimens up to 4 and 5 ft. high. *Taxus* headquarters—over 100,000 plants.

THE W. A. NATORP CO.
Cincinnati, Ohio

TAXUS

Cuspidata Capitata

1½ to 10 feet.

Best available.

Carloads or truckloads only.

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LINING-OUT STOCK

Complete list of deciduous lining-out stock this year.

Place your order now for either Fall or Spring shipment, and avoid disappointment when wanted.

THOMAS B. MEEHAN CO.

Dresher, Pa.

UNDERSTOCKS

Juniperus Virginiana, T. 6c
Thuja Occidentalis, T. 3c
Biota Orientalis 2½c
Add 1c each for quantities less than 200.

FAIRVIEW EVERGREEN NURSERIES

Fairview, Pa.

WHOLESALE GROWERS

Specializing in
Evergreen Seedlings
Transplants and Apple Trees
Write for price list.
Send us your trade list.

MATHEWS EGGERT NURSERY
North Muskegon, Mich.

Japanese Flowering Cherries

Large bush form specimens. Standard
French Lilacs, Malus, Peonies,
Evergreen Grafts.

THE COTTAGE GARDENS
Lansing, Mich.

known as Texas bluebonnets. *Lupinus texensis* differs from *L. subcarnosus* in having a narrower flower spike and more rounded leaf tips, with a difference in the length and color of the pod, a difference in the shade of blue and a two weeks' difference in the flowering period. *L. texensis* is usually considered more a native of our black land region, whereas the other species seems to be partial to the sandy areas."

AIR CONDITIONS GREENHOUSE.

Last year Warren W. Maytrott, owner of Dahladel Nurseries, Vineland, N. J., conceived the idea of air conditioning one of his greenhouses for propagating dahlias through the summer months. After extensive reconstruction, the greenhouse was made to be 16 degrees cooler than the natural temperature in adjoining houses. The air-conditioned greenhouse on the hottest day in July showed 86 degrees temperature, with 82 per cent relative humidity, against the natural temperature of 102 degrees and 40 per cent humidity in the adjoining greenhouses, which were open fully for ventilation.

The greenhouse so altered is 17x36 feet, constructed of concrete and steel, and has a capacity of 200,000 cuttings per season. The concrete propagating benches are followed their full length by air ducts with adjustable outlets, which distribute a blanket of cooled and moistened air evenly throughout the house. These outlets are just above the floor, so that a cool blanket of air is created, equalizing in the walks and then drifting over the cuttings in the benches. The direct cooling is accomplished by atomizing well water of 54 degrees into the air. In addition an automatic water spray atop the ridge of the greenhouse provides a continuous film of cold water over the entire roof.

In order to have sufficient plants to fill his fifty acres each year after selling large quantities of dahlia roots, the propagating of plants is quite important to Mr. Maytrott. He says: "Propagating dahlias is relatively easy early in the season, when natural climatic conditions are, with the addition of a little heat, nearly perfect, but when the mercury starts moving upward trouble begins, including damping-off. At that time a cooling system becomes valuable, especially when it is advantageous to grow a quantity of pot roots, and we grow about 15,000 a year. These late-propagated plants are shifted to 3-inch pots and grown in sash houses with the sash off during the summer and early fall. The sash is put in place before frost, and the plants are grown on until about Christmas, when they are ripened off."

Warren Maytrott's mechanical ability has enabled him to build many devices that are of great value in field and greenhouse, the latest being the air-conditioning equipment installed in the greenhouse. After a study of air-conditioning principles, he designed and built the complete system in his shop.

THE Monticello Nursery Co., Monticello, Fla., has opened a salesroom on Kelly street at Sylvester, Ga.

J. FRANKLIN BRADLEY, landscape contractor, has bought about twenty-eight acres at Huntington, N. Y., to be used for a nursery.

*** TAXUS ***
AZALEAS
RHODODENDRONS

ASK US ABOUT THEM

WYMAN'S

FRAMINGHAM NURSERIES
FRAMINGHAM MASSACHUSETTS

TAXUS
HEADQUARTERS

Brevifolia

Cuspidata

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Intermedia

Media Hatfieldii

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Newark, New York

Shrubs

Evergreens

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Lining-out Stock

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CHASE'S TRADE LIST

Fall 1938 Spring 1939

96 pages

CHASE NURSERY CO.

Chase, Alabama

STOCK YOU WILL NEED!

Ask for prices.

Nursery-grown. Transplanted.
Aronia Arbutifolia.
Cornus Paniculata, *Sibirica*.
Cotoneaster Acutifolia and *Divaricata*.
Ribes Alpinum and *Odoratum*.
Rhus Canadensis, *Glabra*, *Typhina*.
Rosa Setigera, *Blanda*, *Rubrifolia*.
Bolleana Poplar.
Malus (Flowering Crab).

ESCHRICH'S NURSERY,

Sta. F, Route 9, Milwaukee, Wis.

WILLIS NURSERY Co.

Wholesale Nurserymen

Write for Catalogue

OTTAWA - - KANSAS

WHOLESALE GROWERS

of a complete line of Nursery Stock
including Fruit Tree Seedlings.

Lake's Shenandoah Nurseries

Shenandoah, Ia.

Coming Events

CONVENTION CALENDAR.

December 9 and 10, Minnesota State Nurserymen's Association, Hotel Lowry, St. Paul.

January 9, Georgia State Nurserymen's Association, Atlanta.

January 10, Massachusetts Nurserymen's Association, Boston.

January 10 to 14, New York State Nurserymen's Association, Rochester.

January 11 and 12, Illinois State Nurserymen's Association, Hotel La Salle, Chicago.

January 17, Virginia Nurserymen's Association, Richmond.

January 18 and 19, Oklahoma State Nurserymen's Association, Hotel Huckins, Oklahoma City.

January 19 to 21, Ohio Nurserymen's Association, Hotel Netherland, Cincinnati.

January 24 and 25, New England Nurserymen's Association, Boston, Mass.

January 24 to 27, New Jersey Association of Nurserymen, Trenton.

February 8 and 9, Michigan Association of Nurserymen, Hotel Olds, Lansing.

KANSAS NURSERY SCHOOL.

The second annual school for Kansas nurserymen will be held by the department of horticulture of Kansas State College, Manhattan, December 12. Registration will take place at Dickens hall at 9:30 a. m., and the meeting will be called to order at 10 a. m. by Dr. W. F. Pickett, who will preside at the morning meeting, while Ralph Ricklefs, president of the Kansas Nurserymen's Association, will preside at the afternoon session. The program is as follows:

Welcome, by Dr. W. F. Pickett, department of horticulture.

"The Extension Program in Landscape Gardening," by L. M. Copenhaver, extension specialist in horticulture.

"The Propagation of Evergreens," by C. A. Chandler, Kansas City, Mo.

"The Social Security Act," by Major Paul S. Elias, Kansas City, Mo.

"Soil Reaction and Plant Growth," by R. I. Throckmorton, department of agronomy.

Noon luncheon, cafeteria style, Thompson hall.

"The Big Apple of Your Business," by Dr. H. T. Hill, department of public speaking.

Inspection of student horticultural show.

"Some Elm Diseases," by Dr. D. B. Creager, department of botany and plant pathology.

"Some Fundamentals of Landscape Design," by L. R. Quinlan, department of horticulture.

"The Red Cedar Scale and Other Injurious Insects," by G. A. Dean, department of entomology.

Panel discussion of some ornamentals, conducted by F. P. Eshbaugh, in charge of nurseries, Fort Hayes experiment station, and L. R. Quinlan, department of horticulture.

"Lawns in Kansas," by J. W. Zahnley, department of agronomy.

PLAN FOR ILLINOIS MEETING.

The board of directors of the Illinois State Nurserymen's Association are to meet at Chicago, December 2, to plan in detail the program of the annual meeting to be held at the Hotel La Salle January 10 to 12. Miles W. Bryant, secretary, has had acceptances from several speakers, so that an interesting program is assured.

Ernest Kruse, vice-president, reports an encouraging response to the offer of trade booth space in conjunction with the annual meeting, and there is promise of a good exhibit of stock and equip-

ment such as accompanied Illinois conventions in older days. Just now, after freezing weather for several days, the weather has moderated in this territory and everyone is busy getting out stock while the opportunity lasts.

MINNESOTA PROGRAM.

The dates for the annual meeting of the Minnesota State Nurserymen's Association, to be held at the Hotel Lowry, St. Paul, have been set as Friday and Saturday, December 9 and 10, instead of December 12 and 13, as previously reported, according to B. J. Loas, acting secretary.

The meeting will be called to order at 9:30 a. m. in the Spanish room, by President R. D. Underwood. The program is as follows:

DECEMBER 9, 9:30 A. M.

Roll call.
President's message, by R. D. Underwood.
Report of the secretary and of the treasurer.
Appointment of committees.

"Native and Deciduous Trees and Shrubs and Their Habits and Use in Landscape Work," by F. Elmer Hallberg, landscape architect, St. Paul.
"Greetings from the National Association," by Chet G. Marshall, Arlington, Neb., president of the American Association of Nurserymen.

DECEMBER 9, 2 P. M.

"Collection of Peonies and Lilacs Most Suitable for General Nursery Trade," by A. M. Brand, Faribault.

"What Is Nursery Inspection?" by T. L. Aamodt, assistant state entomologist.
"The American Association of Nurserymen," by Howard Andrews, Faribault.

Business session.
Committee reports.
Election of officers.

DECEMBER 9, 6 P. M.

Social meeting and entertainment.
Buffet supper, Spanish room.
Motion pictures of digging operations with motor power and colored motion pictures of shrubs and flowers.

DECEMBER 10, 9:30 A. M.

"Surplus and Shortages," by D. M. Mitchell, Owatonna.

"The White-fringed Beetle," by A. G. Ruggles, state entomologist.

"Legislative Matters," by M. R. Cashman, Owatonna.

Talk by Herman Wensel, conservation commissioner.

DECEMBER 10, 2 P. M.

"Minnesota Fruit Breeding Farm Report," by W. H. Alderman, director of state fruit breeding station.

Talk by J. O. Christianson, superintendent of the university school of agriculture.

Executive session for members only.

RUTGERS MANAGEMENT COURSE.

Sound business practices, cost accounting, marketing and the psychology of advertising and salesmanship are among the timely topics scheduled for presentation at the one-week short course for nurserymen, to be held the week of February 6, 1939, at the college of agriculture of Rutgers University, New Brunswick, N. J. Well known specialists from

New Jersey and other states will discuss these and other subjects. The list of topics also includes fertilizer practices for ornamental trees and shrubs, the use of hormones in propagating ericaceous plants, trends in the demand for nursery stock and lawn maintenance.

The school will run for five days, with sessions from 10 a. m. to 4 p. m. The class will be restricted to the first sixty persons sending in applications to Dr. P. P. Pirone, New Jersey agricultural experiment station, New Brunswick. It is not restricted to members of the New Jersey Association of Nurserymen. A registration fee of \$5 and a charge of \$1 for mimeographed copies of the lectures will be the only cost for the 5-day course.

GEORGIA MEETING DATES.

The annual meeting of the Georgia State Nurserymen's Association will be held January 9, at Atlanta. President W. L. Monroe has several matters of vital importance to nurserymen to discuss, according to an announcement from J. G. Barrow, secretary.

VIRGINIA MEETING DATE.

January 17 has been selected as the date for the winter meeting of the Virginia Nurserymen's Association, to be held at Richmond, according to G. T. French, secretary and treasurer. Most of the time will be devoted to a round-table discussion, at which the nurserymen may bring up and discuss any problems they may have.

CANADIAN GROUP MEETS.

The attendance at the annual meeting of the Eastern Canada Nurserymen's Association, at the Royal York hotel, Toronto, November 17, was the largest ever experienced by the association.

The program consisted of educational features, as well as discussions by officials of the federal and provincial governments on such subjects as new insect pests, plant hormones, credit reports, price spreads, tariff, grade standards and plant patents.

E. B. Luke, president of Luke Bros., Ltd., Montreal, was elected president of the association for the tenth consecutive year. Other officers elected for the ensuing year are: Honorary president, Senator E. D. Smith, Winona; vice-president, H. B. Dunnington-Grubb, Toronto; directors, E. S. Wellington, Toronto; L. Smith, Winona; K. McDonald, Ottawa; representative on horticultural council, E. B. Luke. L. F. Burrows, Ottawa, is secretary-treasurer.

FRUIT TREE SEEDLINGS WESTERN-GROWN

(APPLE — MAHALEB — MAZZARD
QUINCE — MYROBALAN
PEAR — BARTLETT,
FRENCH, SEROTINA, USSURIENSIS

A large acreage of high-quality Fruit Tree Seedlings. Growing plants in Washington and Kansas. Get our prices before buying.

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Large and Complete Line General Nursery Stock

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Shenandoah, Iowa

"One of America's Foremost Nurseries"

SPECIALS

3000 Chinese Elm, 5 to 6 ft.	\$2.30
1500 Chinese Elm, 6 to 8 ft.	.35
1000 American Linden, 1 1/2 to 2-in.	1.10
500 American Linden, 2 to 2 1/2-in.	1.25
500 Sugar Maple, 1 1/2 to 1 3/4-in.	1.25
200 Bur Oak, 3 to 10 ft.	1.50
2000 Lombardy Poplar, 8 to 10 ft.	.25
500 American Wild Plum, 5 to 6 ft.	.15
1000 Black Walnut, 4 to 5 ft.	.25
500 Niobe Willow, 6 to 8 ft.	.50
250 Wisconsin Willow, 5 to 6 ft.	.35
2000 White Elm, 1 1/2 to 2-in.	.75
2000 White Elm, 2 to 2 1/2-in.	1.00

Also a complete line of Hardy Shrubs, Evergreen liners and Palms.

SHERMAN NURSERY CO.
Charles City, Iowa

Grape Cuttings and Vines

a specialty

Write for price list.

INDEPENDENT FRUIT CO.
Penn Yan, N. Y.

46 years growing and selling
SMALL FRUITS OF QUALITY
is your guarantee
of our reliability and integrity in business dealings.
We meet HONEST COMPETITION.
THE F. E. SCHIFFERLI & SON NURSERIES
Box 1 Fredonia, N. Y.

COMMERCIAL NURSERY CO.
Decherd, Tenn.

Fruit Trees—All kinds

Apple, extra fine 1 and 2-year.
Peach, year-old and June Buds.
Kieffer Pear, 1-year, 4-ft. and 3 to 4-ft.
Give us a chance to quote you.

APPLE SEEDLINGS

Nebraska-grown. Free from aphid and knot. Good grades. Ask for our low prices.

FAIRBURY NURSERIES
Fairbury, Neb.

Strawberry and Small Fruit Plants

State inspected, certified, guaranteed good; roots moss wrapped.
Blakemore, Klondike, Missionary, Aroma, Dunlap, Gandy, Bellmar, 1000, \$2.00; 10,000, \$17.50.
Premier, Dorsett, Fairfax, Catibidi, 1000, \$2.50; 10,000, \$22.50.
Progressive, Mastodon, Gem, everbearers, 1000, \$3.50; 5000, \$25.00.
Acme Thornless Youngberry and Boysenberry, 100, \$5.00; 500, \$21.00; 1000, \$40.00.
Standard Youngberry (thorny), 100, \$2.50; 500, \$9.00; 1000, \$15.00.
Kudzu Crowns, 3-year-old, 100, \$1.50; 500, \$6.75; 1000, \$12.50. Shipped direct to you or your customers.
SHELBY PLANT FARMS, Memphis, Tenn.

WANTED

Pound Sweet Apple Tree

If you have a good straight tree 3 to 4-in. caliper, well formed and healthy, let me have a price on same balled and burlapped, delivered to Syracuse. No substitute. If not size asked for, what have you?

E. C. Bushnell Nursery
Landscape Contractors
115 Englewood Ave. Syracuse, N. Y.

OBITUARY.

Frank D. Moore.

Frank D. Moore, Ardmore, Pa., died November 5 at his home at Penn Valley. Mr. Moore was head of Moore & Sons, nursery and landscape construction engineers, which firm his father founded sixty-three years ago. He was a member of the Pennsylvania Nurserymen's Association and the American Association of Nurserymen. Mr. Moore is survived by his widow, Helen, and thirteen children. Funeral services were held November 9.

Eric Gustave Liljenwald.

Eric Gustave Liljenwald, Pasadena, Cal., died November 1 following a sudden heart attack. He was 48 years old. Mr. Liljenwald had been a gardener at Pasadena for twenty-three years, when in 1932 he became associated with Mr. Donovan and they established Liljenwald & Donovan, a seed and nursery firm. Mr. Liljenwald served several times as president of the Pasadena Horticultural Society. He belonged to the Odd Fellows and the American Legion.

A widow and four children survive Mr. Liljenwald, for whom funeral services were conducted at Ives & Warren mortuary November 4.

William F. Miller.

William F. Miller, 68, prominent nurseryman and active south Jersey civic leader for many years, died November 24 at his home, at Gloucester City, N. J.

For many years Mr. Miller served as township clerk of old Center township, before it was divided into several boroughs by acts of the state legislature. He was owner and operator of William F. Miller's Nursery, a director of the Blackwood National Bank & Trust Co., a charter member of the Gloucester Rotary Club and active in several fraternal lodges. He purchased part of the old Cloverdale stock farm, in the eastern section of Gloucester, twenty-two years ago and developed a nursery farm. He is survived by his widow, Mrs. Laura Whitely Miller.

A PACKING shed and office building have just been rebuilt on the property of the New Braunfels Nursery & Floral Co., Inc., New Braunfels, Tex. The buildings were relocated and the grounds arranged around the entrance to enhance the beauty of the nursery.

THE executive committee of the Massachusetts Nurserymen's Association met November 22 at the Parker House, Boston, Mass., to arrange the program for the annual convention to be held January 10. The annual meeting of the New England Nurserymen's Association is always held a fortnight later, January 24 and 25 this year.

THE highway department of the state of South Carolina has advertised for sealed bids for nursery stock to be used on a project in Greenville county. The advertisement calls for a bid on a list of fourteen different items of stock, comprising over 1,500 plants. The bids will be opened December 5, at 11 a. m., at the offices of the highway department, at Columbia.

PEACH, APRICOT PLUM AND NECTARINE

in yearling and June Bud stock.

Also Bartlett Pear, French and Robe de Sergeant Prune and Newton Apple in 2-year branched at 32 inches.

Stock ready for shipment.

KIRKMAN NURSERIES

San Joaquin County
Bethany, California
Wire through Tracy, California

SMALL FRUIT SPECIALISTS SINCE 1875

Grapevines and Currants
in all varieties
by the millions

CONCORD

2-yr. No. 1, \$22.50 per 1000
1-yr. No. 1, 15.00 while they last

All other plants priced to sell.

Get our low quotations for quality stock before placing your order

WEST HILL NURSERIES

Box 15 Fredonia, N. Y.

CHIEF and LATHAM RASPBERRIES RED LAKE CURRANT

Hardy Fruit Tree Seedlings

Americana Plum Manchurian Crab

ANDREWS NURSERY CO. Faribault Minn.

SMALL FRUIT PLANTS

Evergreens — Shrubs
Lining-out Stock

Send for Complete Trade List

SCARFF'S NURSERIES

New Carlisle, O.

Wholesale Growers of

Grapevines, Currants,
Gooseberries, Blackberries
and Raspberries

Let us quote on your requirements

FOSTER NURSERY COMPANY, INC.
69 Orchard St. Fredonia, N. Y.

Our Specialties Are

GRAPEVINES, CURRANTS,
STRAWBERRIES

General line of Small Fruit plants
Trade list sent on request

L. J. RANDO'S WHOLESALE NURSERIES
R. 1 Bridgman, Mich.

Landscape Group Meets

COLUMBUS LANDSCAPERS.

Plan Christmas Party.

The November meeting of the Columbus Landscape Association was held at the Charminel hotel, Columbus, O., the evening of November 17, being preceded by a dinner in one of the private dining rooms.

President Harold C. Esper, of Ohio State University, presided and Secretary W. Stanley Speed opened the meeting with the reading of the roll call and minutes of the previous meeting.

It was announced that there were still available some copies of the "historical sketch" circular which the association put out a few months ago.

Walter Tucker stated that the date of the Christmas party has been definitely set for December 20 in the main dining room of the Charminel hotel. He also stated that there would be a meeting of the program committee, consisting of Howard Warwick, William P. Robinson and himself, within the coming week to make final plans. Suggestions for entertainment were given by some of the members.

Ray Dietz, of the parks improvement committee, stated that while nothing definite had been accomplished since the preceding meeting, the committee had been functioning and expected to have something definite to report in the near future.

Bert Kleinmeyer explained the present status of the Garden Center project, stating that, while the city council has granted the right to beautify the land in the particular section in which the proposed building is hoped to go, as yet no agreement has been reached concerning the building itself, though it is felt that the council will soon pass a resolution which will be more satisfactory in this regard.

Harry O'Brien, of "Dirt Gardener" fame, upon being asked to account for himself in missing the last couple of meetings, stated that this had really been one of the first open evenings he had in several months, having traveled 7,000 miles in the last couple of months taking pictures, many in color, and gathering information to be used in his articles.

After this came the feature of the evening, entitled "Discussion of Customer Relationship." Starr Windsor, discussion leader, stated that he believed one of the best ways of discussing this subject was to ask each member to tell of complaints he had heard from customers concerning other members of the landscape association as well as nonmembers. All these complaints were jotted down by Mr. Windsor, and by the time all had had their say, Mr. Windsor had an impressive array of complaints. These he scored according to the frequency that they were mentioned.

Among the leaders were the following: Prices too high, improper selection and spacing of plant materials and failure of the landscape man to keep his promises. Others which ranked high included: Failure to clean up after completing the job, the employment of incompetent help, lack of

follow-up after selling the job, over-selling on number of plants and a lack of interest in the customer. Still others mentioned were: Improper handling of plants, improper trimming of shrubbery, hesitancy toward giving information concerning plant materials, giving out wrong information to the customer, lack of originality in planting, doing more work than told to do and poor digging of plants.

Price Complaints.

Concerning price complaints, it was agreed that the public must be educated to know how much labor and time are involved in the production of various plant materials, especially in comparison to other plant materials; likewise, the members felt that, since the quality of stock they sell is above average, they should impress their customers with quality along with price; also, the matter of installment selling of shrubs was suggested, whereby the customer is first prepared an entire planting plan (and charged for it) and then, in case he cannot afford to have the entire plan executed at once, the landscape man shows him how he can have a portion of the plan worked out over a period of years.

Education of the client, as well as the landscape man in some instances, was likewise seen as a way to remedy improper selection and spacing of plant materials; photographs of good and bad plantings, colored movies of the same and a personal tour with the customer to show him plantings which have been properly as well as improperly executed were mentioned as helps, as well as an actual planting made around a new home by the members of the club working in cooperation with the builder or owner, provided the association supplies only the labor.

Failure to Keep Promises.

On the subject of failure to keep promises, the following comments were heard: Keep a card index of

IF YOU plant Tennessee Natural Peach Seed

you will not be sorry. Reliable and Dependable. Write for prices on 1937 crop. 6000 to 7000 seeds to the bushel (50 lb.)

Fruit Trees, Shade Trees,
Ornamental Trees,
Shrubs and Evergreens

Southern Nursery & Landscape Co.
Winchester, Tennessee

SEEDS

Tree and Shrub
Perennials

HERBST BROTHERS

92 Warren St..

New York, N. Y.

clients together with the work done and to be done and keep especially the latter prominently situated as reminders; always carry a notebook and never mark telephone numbers or addresses down on loose pieces of paper, and think before making promises.

In a like fashion several of the commoner causes for complaints were analyzed and suggestions made on how to remedy them, but because of the lateness of the hour, the discussion was cut short to be resumed at a future meeting. The secretary was instructed to work up this list of complaints, together with suggestions, and to have a sufficient number of typewritten copies or mimeographed copies so that every member may secure a copy.

After a general expression of feeling that this was one of the most informative and worth-while meetings the association has ever had, a motion for adjournment was passed.

PORTLAND CLUB MEETS.

Twenty-one members attended the monthly meeting of the Portland Nursery Club, held November 9, at the Town Tavern, Portland, Ore.

Three guests of the evening were speakers. Mrs. Jessie M. Honeyman, president of the Oregon roadside council, traced the history of highways from early Egypt until the present day and told of the work of the council.

Dr. John Milbrath, Oregon State College, discussed the work being done on nursery problems at the college and recommended the use of a copper-type spray, applied in early autumn, for the control of Berceman's blight, although work on the subject is still being done, as well as on the defoliation of roses by the use of ethylene gas.

Dr. J. Carl Dawson, Missouri state entomologist, commented upon the work being done by the Oregon department

SEEDS FOR YOUR NURSERY

	1/4 lb.	Lb.
Apple Seed, French Cider Crab, a hybrid race between <i>Malus sylvestris</i> and <i>Malus domestica</i> , most suitable for stock. \$8.00 for 10 lbs.		\$0.95
Acer platanoides, Norway Maple. \$4.50 for 10 lbs. ....		.50
Berberis Thunbergii, clean seed. \$21.00 for 10 lbs.		2.25
Betula grossa, Japanese Cherry Birch. \$1.00 for 10 lbs.		2.00
Betula lutea, Yellow Birch. \$18.50 for 10 lbs.		2.00
Evonymus Bungeanus, graceful tree fruiting oriental of pendulous habit, hardy everywhere. ....	.75	2.50
Liriodendron, Tulip Tree, hardy northern strain. New England collected. \$7.00 for 10 lbs. ....		.75
Seed hand-cleaned ready for planting. \$8.50 for 10 lbs. ....		.90
Malus Zumi (Sieboldii) calocarpa, pomes. ....	.75	2.50
Prunus maritima, Beach Plum.		1.00
Prunus, Japanese Flowering Cherries:		
Lannesiana. ....	.40	1.35
serrulata. ....	.40	1.35
serrulata subsp. <i>spontanea</i>. ....	.50	1.75
subhirtella. ....	.75	2.50
subhirtella pendula. ....	.60	2.00
subhirtella pendula. ....	.75	2.50
Quercus rubra, Northern Red Oak, hand-selected. \$12.00 per 100 lbs.		

F. W. Schumacher, Horticulturist
P. O. Box 131, Jamaica Plain, Mass.

PEACH PITS

Our Pits Compare Favorably
With the Best

HOGANSVILLE NURSERIES
HOGANSVILLE, GEORGIA

FOREST TREE SEEDLINGS

In Catalpa Speciosa, American Elm, Chinese Elm, Black Locust, Honey Locust, Thornless Honey Locust, Hackberry, Russian Mulberry, Russian Olive and Osage Orange, in all sizes of smooth 1-year seedlings.

MYROBALAN PLUM SEEDLINGS

In No. 1 and No. 2 sizes.

MAHALEB CHERRY SEEDLINGS

In 1/4-in. and up size.

Prices upon application.

(All stock in winter storage and can be shipped now.)

THE WINFIELD NURSERIES
Winfield, Kans.

BOYD NURSERY COMPANY

McMinnville, Tennessee

WHOLESALE GROWER

of

**Tree Seedlings and
Lining-Out Stock**

Write for Prices on Peach Pits

**EVERGREENS**

For Seventy-four years
growers of Quality Evergreens
Lining-out Stock a Specialty
Write for Trade List

EVERGREEN NURSERY CO.
Established 1864 : STURGEON BAY, WIS.

BOLLEANA POPLARS

Choice, well branched, straight stems,
with good root system.

6 to 8 ft. 50c 1 1/4 to 1 1/2 in. 90c
8 to 10 ft. 75c 1 1/2 to 2 in. \$1.25

ESCHRICH'S NURSERY

Sta. F, Route 9, Milwaukee, Wis.

**NURSERY-GROWN AND
COLLECTED SEEDLINGS**

Wholesale prices to nurserymen and dealers only.
Redbud, Blue Ash, White Oak, Black Walnut,
Butternut, Red Maple, Sugar Maple. Many
varieties.

TARLTON NURSERIES

Morton Bros., McMinnville, Tenn.
Route 7

NORTHERN MINNESOTA TREE SEEDS

Including

Pinus Banksiana, Jack Pine
Pinus Strobus, White Pine
Pinus Resinosa, Red Pine
Picea Canadensis, White Spruce

Write for samples and prices.

Bear Creek Evergreen Nursery
Aida, Minnesota

NORTH DAKOTA SEEDS

Juniperus scopulorum
(Silver cedar)

Arctostaphylos Uva-ursi
(Kinnikinnick)

Also, Rosa Woodsii, Ball Cactus (Mamillaria vivipara) and other hardy seeds.

E. C. MORAN Medora, N. D.

of agriculture in eliminating license fees between states. He also told of nursery conditions in Missouri.

Officers elected for the ensuing year were as follows: President, A. McGill; vice-president, J. E. French, and secretary and treasurer, Sam Rich.

The Oregon Association of Nurserymen, of which C. B. Miller is president, is planning a meeting at Portland, January 12.

CRAIG TO CRUISE AGAIN.

William N. Craig, noted horticulturist, writer and lecturer of Weymouth, Mass., will again this winter conduct his annual garden lovers' cruise to the West Indies. Those making the trip will sail on the T. S. S. Transylvania of the Anchor line from New York January 28, 1939, for a 12-day cruise of unusual interest. Five fascinating ports of call will be visited. These include Port-au-Prince in the so-called Black Republic, Haiti; Kingston in tropical Jamaica, Santiago and gay Havana in Cuba and Nassau in the Bahamas.

Special entertainment and shore excursions for the members of this group will include visits to famous botanical gardens, experimental gardens, lovely estates and private gardens in the various places visited, as well as the usual points of interest. There will also be special luncheons and dinners, which will include exotic foods peculiar to the places visited. Complete information as to membership and special features of this cruise may be obtained by writing Mr. Craig at Weymouth.

NEW ENGLAND NOTES.

After the hurricane the state of Massachusetts voted \$19,000,000 for relief purposes, including repairing the damage to trees and shrubs at various state institutions. As usually happens when large sums are to be spent, politicians and others thought this was a fine opportunity to get a generous slice of what was available, and it remained for some members of the Massachusetts Nurserymen's Association and the Taxpayers' Association to bring to the attention of the public some of the so-called improvements and their cost. One case was instanced and illustrated in the daily press, where not over \$50 worth of damage to trees and shrubs was done and an expenditure of over \$26,000 had been authorized through a Cambridge agent for an out-of-the-state nursery. Protests have been effectual in holding up payments on these and other contracts where political interests seemed to be interested.

It is estimated by government officials who have made a close study of the devastation caused by the late hurricane to woods and forests in New England that it would require 1,660 miles of loaded freight cars to haul away the fallen logs of white pine and other trees. This equals the normal needs of board lumber in New England for a period of thirty-six years. Whereas before the storm \$4 to \$6 per thousand feet were being offered for white pine, this has now fallen to 50 to 60 cents, showing the tremendous economic loss sustained. In many cases where whole woods are laid low, it is impossible even to get anyone to take the lumber away as a gift.

FALL 1938

ELM, American, Moline and Vase, up to 4 ins. All transplants.

MAPLE, Norway, up to 3 1/2 ins. Transplants, extra select, spaced 7x7 ft.

POPLAR, Lombardy, up to 2 ins.

WILLOWS, Thurlow, up to 3 ins.

BARBERRY, Thunbergii, up to 2 to 3 ft.

SPIRÆA, Vanhouttei, up to 5 to 6 ft.

APPLE, 2-year.

CERRY, 1-year.

PEACH.

All of above items can be supplied in carload lots.

Send for list on many other items.

C. M. HOBBS & SONS, INC.
Bridgeport, Indiana

Largest Nursery in Indiana. Est. 1876.

HOLTON & HUNKEL CO.

10 100
rate rate

Juniperus Pfitzeriana
Spreading. 18 to 24
ins., xxx, B&B. \$2.00 \$1.80

Juniperus Canadensis
3 to 3 1/2 ft., xxx, B&B. 3.25 3.00

Black Hills Spruce
3 to 3 1/2 ft., xxx, B&B. 2.00 1.75

MILWAUKEE, WIS.

CARAGANA ARBORESCENS

3-year transplants. "Heavy" is specimen quality—many branches, stocky, top-notch in every way—offered at hedging prices!

"Light" grade enables you to offer well branched hedge material much heavier than seedlings—and complete with seedling prices.

	Heavy	Light
*Mile-high grown 10 100 10 100		
12 to 18 ins.	\$0.45	\$3.00
18 to 24 ins.	\$0.75	\$6.50
2 to 3 ft. ....	.90	7.50
3 to 4 ft.	1.25	9.50
4 to 5 ft.	1.75	14.00
25 per cent will hold for spring delivery.		

FRANK M. RICHARD, JR.
P. O. Box 363 Fort Collins, Colo.
*Mile-high grown means better quality.

DON BYERS' HARDEE

The first and only peach granted a patent on the proved claim of cold resistance and hardiness—all the good qualities of Elberta plus bud and wood hardiness.

Today's Outstanding Peach—Write for Literature

THE FRENCH NURSERIES
CLYDE, OHIO Since 1863

JEWELL Wholesale

Hardy Minnesota - grown
Nursery Stock and Liners

THE JEWELL NURSERY CO.
POUCH N

Lake City, Minnesota

California News

SOUTHERN CAL. NURSERYMEN.

To Continue Association.

Four vital problems were the special consideration of a meeting of the directors of Horticultural Industries, Inc., at Los Angeles, Cal., November 3. They were: Should Horticultural Industries, Inc., continue to operate as a nursery association?; consideration of the report of Chairman Scherer's committee on cost prices for the production of nursery stock; temporary suspensions of rules and regulations on identification cards for landscape architects, contractors and contracting gardeners; whether the interests of Horticultural Industries, Inc., and the nursery trade would be best served by the Japanese members' withdrawing and transferring their support to their own Southern California Japanese Nurserymen's Association.

A thorough discussion centered on the first question, for, obviously, if the answer was "no" the remaining problems would have been of no concern to the directors who had a "travel investment" of over 600 miles in order to be present.

Good and bad features of the organization were brought out into the open, recalled and reviewed; the history of legislative emergencies, state and national; appearances before officials and commissions, fair price maintenance, arbitration adjustments, tax saving and trade information to members were all presented.

Surprise was manifested at the small operating dues of the organization compared to other associations. Following the discussion, it was moved and seconded that (a) in view of present conditions, a trade association for the nursery industry of southern California is a vital necessity and must be supported if nurserymen are to maintain their business standing; (b) Horticultural Industries, Inc., offers the best facilities to nurserymen for the advancement of their business; (c) those present pledged their active personal cooperation and further financial support to its continued program of service.

Mr. Scherer's committee on fair cost prices for production of nursery stock submitted its report as follows: Thirty, forty and fifty thousand per acre:

	Fast-growing 6 months	Medium-growing 12 months	Slow-growing 18 months
1-gallon cane	\$0.1285	\$0.19	\$0.2795
5-gallon cane	0.6805	0.857	1.046
5-gallon roses	0.8175		

These figures represent cost prices for production of nursery stock and are in no wise representative of retail prices. The cost of retailing should be added. The information contained in Mr. Scherer's report represents cross-section contributions from all classes of growers throughout the jurisdiction and is legally competent evidence under the terms and conditions of the unfair practices act. It was unanimously adopted.

As an effective answer to the criticism of discount abuses on the part of members toward landscape architects, contractors and contracting gardeners, it was voted that the rules and regulations concerning identification cards for

classifications 2 and 3 be temporarily suspended and members permitted to exercise their own discretion on discounts with due observance to the law on sales below cost.

Japanese Membership.

A discussion of question 4 regarding the Japanese membership brought out the fact that many serious complications have arisen due in part to lack of thorough understanding, racial prejudices and the wide divergence in methods of transacting business. This has been particularly true in the bedding plant group. After a fair and frank discussion of the problem, the five Japanese members present stated that they were willing to follow any course which indicated the best interest of all concerned, that while they could not speak for others they would arrange for an early meeting of Japanese growers, giving the matter earnest thought, and come to an early decision. It was pointed out that a joint committee and board meeting could be had on matters of interest. Throughout the conference the thought of all seemed to dwell on the best interests of the trade. The secretary, Lou Johnson, has asked the membership to express its opinion to his office, keeping in mind the importance of the question and the fact that many Japanese members have made substantial contributions in both time and money to the program of Horticultural Industries, Inc.

Following the meeting, President Harold McFadden, of Del Amo Nurseries, sent a letter to the membership asking for their support, since the unanimous opinion of nurserymen has been in favor of a trade association. He pointed out the cooperative nature of such an organization and that its success depends entirely on the attitude of its members.

INSTITUTE MEETING.

The Southern California Horticultural Institute held its November meeting at the Mayfair hotel, Los Angeles, Cal., with an interesting program devoted to subtropical fruits. Jess Watts, of the Armstrong Nurseries, Ontario, was the principal speaker. Lovell Swisher, president of the institute, presided.

Mr. Watts brought specimens of some of the new fruits and reminded the audience that many deciduous fruits do not like warm winters and that what

the nurserymen are striving to get are new varieties which will hold up. He exhibited and told about the new limequat, a cross between a lime and a kumquat, more hardy than a lime. He showed a new lemon with pink flesh, with which he humorously said the well known pink lemonade could now be made. He told of the Ponderosa lemon, giving a pint of juice, which is not practical commercially. Other fruits shown were the sapota, the Wilson persimmon and several new cherimoyas.

Cliff Tanner, San Diego, brought a display of Australian nuts, with good foliage; mangoes, and lemon guavas as large as lemons.

The meeting attracted a number of visitors from the agricultural colleges and state departments. The plant forum, a regular feature of the meetings, resulted in first place going to L. B. Merrick, for a mammoth display of *Pyraantha Duvali*; second to Ernst Rober, for *pelargoniums*; third to the Germain Seed & Plant Co., for potted plants; fourth to Mildred Davis, for potted plants, and fifth to the Los Angeles water department, for winter roses and other plants.

The December meeting will close the contest, the score so far being as follows: West Los Angeles Nursery, 450 points; Germain Seed & Plant Co., 350; Bodger Seeds, Ltd., 225; Coolidge Rare Plant Gardens, 225; Del Amo Nurseries, 200; Routh Stone, 150; Armstrong Nurseries, 150; Hagenburger Specimen Plant Gardens, 150; Evans & Reeves Nursery, 125; Mildred Davis, 125; Los Angeles water department, 125; Howard & Smith, 100; L. B. Merrick, 100; Silva's Rare Plant Gardens & Nursery, 75; Paul J. Howard's Horticultural Establishment, 75; Lloyd Cosper, 75, and Gebhardt Precht, 50.

DISCUSS PRUNING METHODS.

Toichi Domoto, Hayward, Cal., led a discussion on pruning at the meeting of the California Horticultural Society November 21, at the Commercial Club, San Francisco, Cal. Dividing the program into three parts, Mr. Domoto first introduced J. A. McDonald, of the California Nursery Co., Niles, who demonstrated the method of cutting back de-



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Lining-out Stock
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**SHERWOOD
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Evergreens
Propagators & Growers

141 S. E. 65th Avenue PORTLAND, ORE.
Remember the Convention, Portland, 1939

SEEDLINGS

MAHONIA AQUIFOLIUM
4 to 12 inches (row run), \$20.00 per 1,000

EUROPEAN MOUNTAIN ASH

(2-year)

2 to 3 ft., \$20.00 per 1,000
3 to 4 ft., \$25.00 per 1,000
4 to 5 ft., \$35.00 per 1,000

DOGWOOD (PACIFIC NUTTALLII)

12 to 18 inches, \$5.00 per 100;
\$40.00 per 1,000

ENGLISH HOLLY

2 to 3 inches, \$5.00 per 100;
\$40.00 per 1,000
250 at 1,000 rate.

MOUNT VERNON NURSERY
Mount Vernon, Wash.

Oregon-grown ROSEBUSHES

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List

PETERSON & DERING, Inc.
Wholesale Rose Growers
SCAPPOOSE, OREGON

A. MCGILL & SON

FAIRVIEW, OREGON

Wholesale Only

ROSES

Send us your list of wants

Fruit Tree Seedlings
Flowering Ornamental Trees
Shade Trees

Grown right and packed right

Combination carloads to eastern distributing points save you on freight.

New Rose TEXAS CENTENNIAL

(Red Hoover)

Plant Patent No. 162

Ask for color illustration and prices.

Also for our general list of roses.

DIXIE ROSE NURSERY
Tyler, Texas

HARDY
Rosebushes
for 1938-39
HOWARD ROSE CO.
Hemet, California



ORENCO NURSERY CO.

Orengo, Oregon
Wholesale Growers

Fruit, Shade, Flowering Ornamental
Trees, Fruit-tree Seedlings, Roses, Etc.
Very complete line of quality stock
Catalogue sent on request.

PACIFIC COAST NURSERY

1436 N. E. Second Ave. PORTLAND, ORE.
Largest Fruit Tree Seedling Growers
in America.

We accept growing contracts for 3 to 5 years.
Quality stock. References on request.
John Holmason, Prop.

ciduous plants. He advised the group to cut out the old flowering wood as soon as it is through blooming, aiming to shape the shrub, to get plenty of new wood for flowers for another season and to leave a few short laterals for new growth. The best time to prune, he stated, is in May.

George Budgeon, of the Berkeley Horticultural Nursery, Berkeley, followed with a discussion on pruning broad-leaved evergreens. Few of these evergreens require much pruning, he stated, but when done, three points should be kept in mind—the formation of good flowering wood, shaping and cutting away injured or diseased wood. Possibly the most that needs to be done generally is to thin the center for better sunlight penetration and to give a little aid in shaping at the early stages. On fuchsias, pruning should start with the small plants, pinching the tops to form a well balanced specimen. Fuchsias may be pruned at any time of the year while the plant is growing. He urged that the plants be placed so that they do not have to be pruned to fit the spot in which they are growing.

Choosing wisteria for his first subject, Toichi Domoto said to prune during the period of growth and to keep off suckers. As a potted plant or in a tub, a wisteria is pruned so that at the start the plant will have pleasing lines and branches in balance. Roots are pruned when they are lifted and in dwarfing; leave the major roots. Camellias require little pruning and care must be taken in cutting. Daphne is often too crowded and needs thinning in the center.

LOS ANGELES NOTES.

Lou Johnson, secretary of Horticultural Industries, Inc., made a trip to San Diego last week, visiting nurseries there and en route, to discuss the details of the cost survey just completed by this group.

Lovell Swisher has accepted an appointment by A. F. Shulte, of Oakland, chairman of the floral exhibits committee of the Golden Gate International Exposition, as vice-chairman, responsible for the participation of southern California in this important activity.

The Roy F. Wilcox & Co. nurseries, Montebello, have sent seventeen carloads of trees for use at Treasure island, locale of the San Francisco fair.

The Germain Seed & Plant Co. will enlarge its nursery at 6133 Ethel avenue, Van Nuys, following a recommendation by the city planning commission on the company's application for a rezoning of the area. The company has occupied twelve acres at this location for fifteen years, with a frontage of 650 feet on Ethel avenue, the buildings being set back 600 feet and the front portion used for flower and shrubbery displays, making it one of the show places of the San Fernando valley. The company plans to erect a packing shed forty feet square to pack and ship plants and bulbs.

Theodore Payne, nurseryman and seedsman of Los Angeles, and Charlotte Hoak, South Pasadena, presented a redwood tree to the Wisteria Vine Gardens at Sierra Madre. It was planted at the gardens November 21, in commemoration of the one hundredth anniversary of the birth of John Muir. A woodland nook was also dedicated to the naturalist.

FRUIT and SHADE TREE SEEDLINGS

Oregon and Washington Grown
Apple, Pear, Mahaleb, Mazzard,
Myrobalan

Quince (rooted cuttings)

Chinese Elm Seedlings

Complete Line General Nursery Stock.

Chinese Elm, Transplanted Specimens.

Norway Maple, Lining-out Whips.

Send list of your wants for prices.

New catalogue now ready.

Combination carloads to eastern distributing points.

MILTON NURSERY CO.

A. Miller & Sons, Inc.
Since 1878
Milton, Oregon

Portland Wholesale Nursery Co.

306 S. E. 12th Avenue
Portland, Oregon

To the Trade Only

A complete line of
Nursery Stock and
Nursery Supplies.

Catalogue sent on request.

CONTRACT GROWERS ONLY

We do not grow for open market, either retail or wholesale, therefore do not compete with our contractors. This permits early and prompt shipments. Let us quote you on Apple Grafts, Chinese Elm and Hackberry Seedlings.

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Quarantine Changes

"JAP" BEETLE QUARANTINE.

A list of articles exempt from certification requirements under the Japanese beetle quarantine was approved October 26 and made effective November 1. The announcement is as follows:

"The principal change in this revision is the addition of trailing arbutus to the list of exempted plants. There have been eliminated from this list items such as aquatic plants, silica sand and similar materials, since the conditions of exemption with reference to these items are covered in the current regulations of the quarantine.

"In accordance with the third proviso in notice of quarantine No. 48, as revised, the following articles, being considered innocuous as carriers of infestation, are exempted from the restrictions of the quarantine and of the regulations supplementing thereto:

1. Balsam pillows, when composed of balsam needles only.
2. Banana stalks, when crushed, dried and shredded.
3. Dried moss and dried sand, when heat treated, and when so labeled on the outside of each container of such materials.
4. Floral designs or "set pieces," including wreaths, sprays, basket covers, and all formal florists' designs. Bouquets and cut flowers not so prepared are not exempted.
5. Herbarium specimens, when dried, pressed and treated, and when so labeled on the outside of each container of such materials.
6. Manure, peat, compost, or humus (a) when dehydrated and either shredded, ground, pulverized, or compressed, or (b) when treated with crude petroleum or any other product having high potency as an insecticide, and when so labeled on the outside of each commercial container of such materials. (See also item 13.)
7. Moss, sheet, Calliergon Schriberii and Thuidium recognitum.
8. Mushroom spawn, in brick, flake or pure culture form.
9. Orchids, cut.
10. Orchid plants, when growing exclusively in osmundia fiber.
11. Osmundia fiber, Osmundine, or orchid peat (Osmundia cinnamomea and O. Claytoniana).
12. Resurrection plant or bird's-nest moss (Selaginella lepidophylla).
13. Sphagnum moss, bog moss or peat moss (sphagnum) when dried and baled. (See also item 6.)
14. Trailing arbutus, or mayflower (Epigaea repens), when free from soil or primary roots, and when shipped during the period between October 16 and June 14, inclusive.

NARCISSUS REGULATIONS.

The requirement, in effect since August 1, 1936, that all narcissus bulbs from Holland be given the hot-water treatment upon entry to the United States, was revoked November 10, effective August 15, 1939. The announcement was made in an order signed by Lee A. Strong, chief of the bureau of entomology and plant quarantine of the United States Department of Agriculture.

The information released by the Department of Agriculture is as follows:

"On and after August 15, 1939, all such importations shall be accompanied by a certificate certifying that the bulbs have been thoroughly inspected at the time of packing and found or believed to be free of injurious plant diseases and insect pests.

"Upon arrival at the American ports of entry, all shipments will be examined by inspectors of the bureau of entomology and plant quarantine. This examination will include the cutting of suspicious-looking bulbs when necessary to determine their freedom from infestation by the bulb nematode. Any shipments found infested will be given the latest approved treatment or rejected.

"At the request of The Netherlands government, a committee of technical experts representing the governments of The Netherlands and of this country was appointed for the purpose of considering on the ground, in Holland, the necessity of requiring the hot-water treatment of Holland narcissus bulbs as a condition of entry into the United States. This committee held a series of meetings in Holland, during April, 1938, most of which took place in the narcissus bulb fields, where every opportunity was afforded to inspect the bulbs as to foliage or by lifting them and to observe the cultural practices and sanitary measures employed in an effort to reduce the bulb nematode infestation to the minimum. The field examinations revealed an almost complete absence of bulb nematode infestations in the narcissus plantings.

"In view of this condition and the sanitary measures practiced, which involve repeated field examinations during the growing season, supplemented by inspection and certification of the bulbs at the time of shipment, it was evident, so long as the above conditions exist, that the bulb nematode risk incident to the importation of Holland narcissus bulbs does not justify the continuation of the requirement that all importations of these bulbs be given the hot-water treatment as a condition of entry."

TEXAS NOTES.

H. Durward Thompson, landscape architect and graduate of the Texas A. & M. College, has established a sales yard at Alta Plaza, Corpus Christi.

Reports from J. C. Harris, of the Harris Bros. Nursery, San Angelo, are to the effect that business in that section has been unsurpassed.

R. P. Verhalen, Scottsville, who re-

cently made a tour of the state, reports nursery conditions are active, inasmuch as the constant building in the larger cities requires considerable material. However, the rose situation is lagging. Mr. Verhalen declares that what the rose growers need is an organization built along the line of the California Fruit Growers' Association, with uniform grading, a sales manager and ample warehouses to protect the goods.

Thefts of evergreens and other stock from the Palestine Nursery & Floral Co., Palestine, have been reported.

Wichita Falls has added a new nursery and greenhouse at 1517 Thirteenth street, owned by W. P. Norman.

J. H. Whiteside, of the Whiteside Nursery, Lubbock, recently completed an office adjoining his packing sheds.

The Abilene Nursery, Abilene, recently completed a new house.

SOUTHWESTERN NOTES.

A new flower shop has been opened in "Aggieville," Manhattan, Kan., by Mrs. Thomas Martin. Mrs. Martin was formerly with the Manhattan Floral Co. Associated with Mrs. Martin as a landscape gardener is Margaret Knerr, who received her degree from the Kansas State Agricultural College.

Perry Lambert, nurseryman, Hiawatha, Kan., recently completed a contract for landscaping the United States post office at Sturgeon Bay, Wis.

M. W. Watson, general contractor, Topeka, Kan., was recently awarded contracts for landscaping five schoolhouses at Newton, Kan.

Kaupp Flowers, Nevada, Mo., has sold the last of the greenhouses to the Parker Greenhouse at Fort Scott, Kan., and the houses have been rebuilt at Fort Scott. Kaupp's now operates only a flower shop at Nevada. The company has reentered the nursery business under the name of Kaupp-Carlton Nursery after discontinuing it for a number of years. Jack Carlton, who is in charge of the nursery, reports that this department of the business is good. It has a con-

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tract for landscaping the hospital grounds at Nevada. This firm is now in its forty-eighth year.

J. W. Coursey is starting a nursery at 703 East Atlantic street, Okemah, Okla.

The Texas Nursery Co., Sherman, Tex., has issued a handsome 64-page plate book with over 200 pictures in full color. It contains suggestions for landscaping, with a few sample plans, and features evergreens, fruit and shade trees, bulbs and perennials, the purpose being "to make your home more beautiful, your orchard more fruitful."

Cook Gardens, Ottawa, Kan., have been awarded contracts for roadside planting in Hamilton and York counties, Neb. The planting is to be done in the spring of 1939.

Everette B. Farmer is establishing a nursery at 109 Gray street, Wilson, N. C.

PLAN BIG NATCHEZ GARDEN.

D. R. Smith, proprietor of the Airport Nursery & Floral Co., Jackson, Miss., has been named director of a project to plant a \$5,000,000 garden, covering a 600-acre tract, dedicated to every religious faith at Natchez, Miss. The project will provide employment for about 300 men for three years. It is estimated that 500,000 visitors will be attracted annually, leaving about \$10,000,000 in state-wide retail channels on journeys to the scenic wonder when it is completed. Open all year, it will also provide a marvelous setting for the annual Natchez garden pilgrimage.

The planting will be known as the

Garden of Allah, and members of any religious group will be permitted to hold services there any day in the week. Arranged in the form of an octopus, the garden will have about fifteen miles of driveways through it. Various events described in the Bible will be symbolized in some of the plantings. Famous gardens of history will also be reproduced. At the center a cross will be erected.

WEST VIRGINIA FIRM.

The Hatfield & Cole Co., landscape and nursery firm at Bluefield, W. Va., has been reorganized under the name of Hatfield, Cole & Haines, Landscape Architects and Nurserymen, with offices in the Peery building. Plans have been made for establishing a nursery near the city. Mr. Hatfield and Mr. Cole have been carrying on a successful business in this city for a year and a half.

Thomas Haines, the new member of the firm, is a graduate of the University of Illinois and has developed several estates in different sections of the United States. He received his early training in landscape architecture from his father, John Haines, who was identified with the development of the lake shore region of Chicago and its environs.

CARRIES GROUP INSURANCE.

Seventy-four employees of the Monroe Nursery, I. E. Ilgenfritz' Sons Co., Monroe, Mich., are now eligible to life insurance in amounts ranging from \$500 to \$2,500 each, according to rank or position held and age, according to a statement of the Prudential Insurance

BOOKS

reviewed in this issue
and any others on
horticultural subjects
are obtainable through

THE AMERICAN NURSEYMAN

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Ask for circular of horticultural books.

Co. of America. The policy, involving a total of \$78,000, is of the contributory type, the employees themselves paying a part of the premium and the employing company assuming the remainder of the expense.

This nursery firm has been in existence nearly 100 years, with four generations of the same family having carried on the business, which was established in 1847 by I. E. Ilgenfritz. Today the growing stock covers more than 1,400 acres.

L. B. MERRICK, of the Merrick Nurseries, Whittier, Cal., has taken over and restocked the ornamental department of the Whittier Nursery, 546 East Whittier boulevard. This makes the third unit of Mr. Merrick's business; the office and retail sales yard are located at 541 South Painter avenue and the wholesale yard is on Los Nietos road.

Reviews of New Books

FIRST BOOK ON HEDGES.

While the variety of plants used for hedges has greatly increased in the past two or three decades and data about them have been gathered in various places, the first book to treat solely of these plants has just appeared, "Hedges, Screens and Windbreaks," by Donald Wyman, of the Arnold Arboretum. This book will have a valued place on the reference shelf of the nurseryman as well as in the library of the plant lover.

The larger portion of the book, Part III, comprising 154 pages, is given over to descriptions of about 250 individual hedge plants. In some cases a paragraph, in other cases a page or more, is given to the concise statements about the appearance, habit of growth, flower and fruit, native place and introduction of the plant. The zone of hardiness and the mature height of the shrub or tree are indicated by key letters.

Thirty-two pages, in Part II, are given to lists of hedge plants according to their various uses. Those considered best for the purpose appear in capital letters, while rare species worth a trial are so marked.

The forty-seven pages that compose Part I include short chapters on the uses of hedges and screens, practices followed in transplanting and spacing, the care after planting and trimming.

Dr. Wyman, as horticulturist of the Arnold Arboretum, has had the personal observation of 115 species and varieties included in the demonstration plots at the arboretum and for some years he has been gathering material in reference to the subject matter of the book. The demonstration plantings at the Canadian experimental farm at Ottawa, at the Morton Arboretum, near Chicago, Ill., and at Cornell University, Ithaca, N. Y., have furnished further information. Correspondence with many landscape architects, nurserymen and experiment station workers has brought further material for his survey, of which acknowledgment is made in the author's preface. Fifty half-tone plates and many diagrams add to the book's value.

The volume is the first in a garden series published by Whittlesey House, a division of the McGraw-Hill Book Co., under the general editorship of F. F. Rockwell, garden editor of the New York Times. Anyone interested in the planting of hedges for any purpose, and the possible materials to be employed, will get large value for the \$2.75 invested in this book.

"PLANTS FOR CONNOISSEUR."

While most commercial growers are obliged to give all their time to the plants they produce for a livelihood, some have the opportunity to indulge their interests in trying out unusual species. But few of those are so favored as the author of "The Plants for the Connoisseur," who admits in his preface that he was unusually fortunate in both private and public employers "so that an interest in plants old and forgotten and in plants new and unknown was stimulated and encouraged

by both." The author, Thomas Hay, is superintendent of central parks in London, England. For some years he has contributed notes on the unusual plants he has tested, in two widely known British horticultural publications, the New Flora and Silva and the Gardeners' Chronicle. In addition to a love of plants, Mr. Hay has a love of books, from which he has acquired a knowledge of plant explorers, the geography of the countries they visited, the history of the plants he grows and much allied information that adds to the interest of his writings.

This book of 180 pages carries Mr. Hay's comments on the history, cultivation and propagation of ninety-five unusual plants—some annuals, a few shrubs and most of them herbaceous perennials for the border or rock garden. Sixty-seven of the plants are illustrated in full-page half-tones, from photographs taken by the author's son, Roy Hay. The book was printed in Great Britain and issued in this country by the Macmillan Co. It is an unusual book and one which will be welcomed by those persons interested in growing plants out of the ordinary. The price is \$3.

TRADE'S "GARDEN DICTIONARY."

Ready for distribution is the recently announced trade edition of "The Garden Dictionary," edited by Norman Taylor and published by the Houghton Mifflin Co., at a price so low that it should place the volume in the hands of everyone connected with any branch of horticulture. The work is now available at \$7.50, whereas the first edition, in 1936, was priced at \$16.25. There has been no change in text, and all the twenty-one original color plates appear in the new volume. Differences of minor nature show in paper and binding; the thumb-tab index is also deleted. These things, however, detract no whit from the preëminent value of the book.

The winner of a gold medal of the Massachusetts Horticultural Society as the most notable horticultural book that has appeared in America in recent years, "The Garden Dictionary" fills a definite need for a comprehensive yet concise work, thoroughly informative, but simple. The articles, contributed by sixty-eight nationally recognized authorities on horticulture, garden management and landscape design, cover all phases of gardening in the United States and Canada, providing in a single volume the answers to almost every conceivable garden question.

By its makeup, the book gives the reader instant access to the information he is seeking, whatever his garden experience. The selection of plants discussed represents all those most likely to be of interest to the average intelligent or inquisitive gardener. Under the name of each genus are given the proper pronunciation and a description of the plant's origin, appearance, characteristics, uses and culture. Common names are listed, 4,403 of them, with useful cross references to the botanical names.

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color gardens, descriptions of important plant families, growing conditions in each state, rock gardens and other landscape features. There are a calendar of work to be done and a list of 1,000 garden plants showing their color and usual period of bloom.

The book is 9x11 inches, two and one-half inches thick, with an extra-thick green fabrikkid binding. There are 896 large pages, and a clear type face is used. Text illustrations number 502, besides the color plates and fifty-two maps.

The appearance of this edition at this time suggests it as an ideal Christmas gift for anyone who is horticulturally minded. It has been especially commended as a reference book in the nursery and in the seed and flower store, where it can be consulted alike by customers and members of the staff who desire information.

"THE GARDEN IN COLOR."

The extraordinary demand for books containing pictures of flowers in color has led the Macmillan Co. to bring out another such volume, which is unlike any previous. It is primarily for amateur gardeners, and the author is probably their favorite, Louise Beebe Wilder. She has supplied text, occupying 318 pages in large type, on pages 8x11 inches. As there are 320 color plates in the volume, it will be apparent that the comments run about a page to the color plate. Generally there are two plates to a page, and they are bound in sections of four or eight pages between sections of text. The text refers to the plates by number, and the index carries reference to both plate and text.

To the amateur gardener and plant lover this book will unquestionably be a delight, because he or she can ramble through the pages, admire the illustrations and read the comments in the accompanying text. Perhaps the commercial grower, particularly the specialist, might find the variety so wide that only a part of the contents would interest him, if he is regarding the book as to its help in a business way, but if he has an eye for beauty he will appreciate the lavish pictorial contents, for who would expect to find 320 color plates, most of them equal in size to about one-half the type page in this magazine, in a volume selling at \$7.50?

The character of the plants illustrated runs through a wide range. There are many garden pictures, of various sorts. Many familiar plants are pictured, some in beds and some individual. Some rare plants are also shown. The publisher states that the 320 color plates represent fully 500 different varieties of plants suitable for garden use. Some of the flowers are presented in arrangements in vases.

The book appears at an appropriate time, for it should be a handsome and cherished Christmas gift for any plant lover.

FLOWERLAND NURSERIES, East Orange, N. J., have been incorporated, with \$50,000.

The home of John Schneidman, Paducah, Ky., nurseryman, was destroyed November 21 by fire, creating a loss of \$7,500. Mr. Schneidman carried no insurance.

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CATALOGUES RECEIVED.

[In writing for a copy of any of the catalogues reviewed below, please mention that you saw it described in *The American Nurseryman*.]

Old Farm Nurseries, Boskoop, Holland.—A 20-page catalogue of young trees, shrubs and climbers. Also listed are stocks for grafting and forcing plants.

Robert Wayman, Bayside, N. Y.—A printed sheet as final close-out of Japanese and Siberian irises.

Southside Nurseries, Richmond, Va.—Pocket-size price list of evergreens, flowering shrubs, shade trees, hedge plants, fruit trees and vines.

Azalea Glen Nurseries, Inc., Loxley, Ala.—Pocket-size price list of azaleas, palms, bulbs, shade and ornamental trees, fruits, vines and roses.

Barnham Nurseries, Ltd., Barnham, England.—Trade catalogue of general nursery stock. Featured are fruit trees and roses.

Hakoneya Nurseries, Numasahi, Japan.—A 72-page catalogue listing bulbs and plants. Listed are lilies, azaleas, peonies and rock plants.

Muskogee Greenhouse Co.,—An 8-page wholesale price list of general nursery stock. Listed are shade and ornamental trees, evergreens, hedge plants, lilies and spring bulbs.

Wyman's Framingham Nurseries, Framingham, Mass.—Wyman's Garden Book for 1939 is designed to make the purchase of nursery stock by the public an easier task. All of the hundreds of items listed are accompanied by a brief written description as well as a sketch illustrating the more distinguishing features of the flower, branch, leaf or other part of the particular plant. A special discount of thirty-three per cent is offered to the horticultural trade on quoted lists.

H. G. Hastings Co., Atlanta, Ga.—A 32-page catalogue illustrated in color listing roses, perennial plants, conifers, small fruits and pecan trees.

Krieger's Wholesale Nursery, Bridgman, Mich.—Printed folder, wholesale price list for fall 1938 and spring 1939 of small fruits. Listed are grapes, asparagus roots, rhubarb roots, currants and berry plants.

McIlhenny Nurseries, Avery Island, La.—A pocket-size booklet as wholesale price list of field-grown landscaping stock. Also a price list of camellia plants for season 1938 and 1939.

Atlantic Nurseries, Inc., Berlin, Md.—A printed booklet as trade list for fall 1938 and spring 1939. Included in the listing are ornamental trees, vines and bulbs.

Allen's Nurseries & Seed House, Geneva, O.—Two printed sheets as wholesale surplus list for fall 1938. Listing includes fruit trees, shade trees, ornamental shrubbery and perennials.

Burns Nursery Co., Wills Point, Tex.—A printed folder as wholesale listing of bush varieties of roses.

Southern Camellia Gardens, Crichton, Ala.—A pocket-size booklet as trade list of azaleas, camellias, conifers and shrubs.

Bolen Florist & Camellia Gardens, Lucedale, Miss.—Printed folder as wholesale price list of camellias, palms and magnolias.

New Braunfels Nursery & Floral Co., New Braunfels, Tex.—A 32-page catalogue listing evergreens, hardy shrubs, shade and ornamental trees and other general nursery stock.

Van der Vis & Co., Boskoop, Holland.—A 128-page catalogue of general nursery stock. All materials are grown in Holland.

T. G. Owen & Son, Inc., Columbus, Miss.—An illustrated catalogue of twenty-eight pages listing evergreens, shrubs and shade trees.

Brookdale-Kingsway, Ltd., Bowmanville, Ontario, Canada.—A 72-page catalogue of general nursery stock of this Canadian firm lists shade trees, evergreens, shrubs and other stock grown in the Dominion.

Eddie Nurseries, Inc., Mount Vernon, Wash.—A folder listing a variety of roses, including new patented stock.

Twitty Nursery Co., Texarkana, Tex.—Folder as a wholesale price list for fall 1938 and spring 1939. Listed are evergreens, shade trees, flowering shrubs, hedge plants and roses.

J. A. BARRY is establishing the La Marque Nursery at Texas City, Tex., north of the Jewel theater. Mr. Barry stated that a small shop will be built soon.

THE Pierson Bros. Nursery Co., Fresno, Cal., has added a new seed and garden supply department. The owners, Hollis B. and James L., are planning to dissolve the company and run it on a partnership basis.

THE White Oak Ridge Nursery, Parsonage Hill road, Millburn, N. J., has been purchased by the Estate Maintenance Co., of which Joseph Gilbert is manager. The nursery was formerly conducted by Fred Goebel.

WONDERLAND NURSERIES.

The Wonderland Nurseries, Ellerson, Va., owned and operated by James H. Thompson, are noted throughout Hanover county, Virginia, for the number of chrysanthemums which are grown and shipped from the nursery, according to a report in the *Ashland, Va., Herald-Progress*.

Mr. Thompson grows over 300 varieties in sufficient quantities to list in his catalogue, which goes to the retail trade. In addition to those plants which he shipped last year, Mr. Thompson believes he had over 400,000 plants growing on the 18-acre field.

With the expectation of rooting several million cuttings this year, a number of improvements have been made in the buildings of the nursery. Several acres of seedlings will also be grown with the hope of discovering new varieties worth disseminating.

Next season it is expected to try growing the plants under cloth, a new technique in this section of the country.

Before starting the Wonderland Nurseries, Mr. Thompson was manager of a nursery concern for a number of years.

FIRE AT PANA NURSERY.

Thursday night, November 10, a fire broke out at the Forsythe Nursery, located on route 16, just outside the city limits of Pana, Ill. The greenhouses were destroyed, as were two of the concern's automobiles, a Ford coupé and a Ford truck. Besides the property that was destroyed, orders for the whole year that were being held for shipment when the weather got colder were ruined. Approximately \$8,000 worth of property was lost, of which only \$500 worth was covered by insurance.

WILLIAM N. VARIAN, landscape architect, Yonkers, N. Y., died at his home October 26 as a result of a heart attack.

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George Smith or anyone knowing his whereabouts, answer at once. Nurseryman last known doing business in Tennessee.

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GYPHOPHILA FLAMINGO.

An arrangement has just been made by Henry A. Dreer, Inc., Philadelphia, covering the right to disseminate the new double pink gypsophila, Flamingo, in this country, and a patent has been applied for.

This new gypsophila, an importation from Germany, was grown under trial at Riverton, N. J., during the past summer. It is similar to Bristol Fairy in habit. The color of the flowers is light pink during spring and summer, becoming considerably deeper with cool nights in the fall. It is practically everblooming, bearing a good crop of flowers in the fall if the plants are cut back when the first crop of bloom fades.

This new gypsophila will prove a valuable addition to the list of perennials used for cutting, the daintily formed and colored flowers combining wonderfully well with other outdoor-blooming plants. It will probably be distributed in 1940.

PERMANENT LABELS.

In his use of labels, the nurseryman or plantsman is primarily interested in what he is shipping, and some indication as to the identity of stock which will last from the time it leaves the nursery to the time it is planted in some garden is usually considered enough. For ordinary stock that is probably quite satisfactory, but the gardener buying novelties or unusual plants frequently would like to have a permanent label, as he cannot always remember the name and location of what he plants.

Now that metal tags and labels are available at low prices, it would pay to consider giving this service to customers. Labels consisting of thin pieces of zinc, aluminum or copper may be written on, as one would write a tag with a pencil, though a stiff metal point makes a better impression. In some places a white paint, applied afterward, makes the writing more legible. The trade is already making considerable use of Perma-Labels, but the foregoing suggestion is offered as a way in which nurserymen might cement their relations with customers. Advanced gardeners or those with considerable collections might offer a market for resale, also, if nurserymen or florists carried the labels in stock.

ST. LOUIS NOTES.

Dr. D. C. Fairburn, horticulturist of the Missouri Botanical Garden, has found a way to exterminate moles, beetles and sowbugs by the use of carbon monoxide, which is applied through a long rubber hose, one end of which is attached to the exhaust pipe of an automobile. The other end of the hose is inserted in a freshly made burrow; then the motor is started, forcing the fumes through the tunnel.

The Gern nursery, Affton, St. Louis county, has about completed its big job of planting in Richmond Heights. It had the contract from the Manhussett village corporation to lay out a large plot of land for building lots with 500 shade trees and 400 evergreens.

R. BACON, formerly of the Golden West Nursery, Pomona, Cal., has opened a new nursery at Covina, known as the Covina Nursery, at 417 North Third street.

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PRACTICAL TREE SURGERY, by Millard F. Blair. Three chapters are devoted to brief descriptions of the principal trees and shrubs of interest to the tree surgeon, with the insects and fungous diseases which most frequently attack them. Further chapters treat diseases and insects by groups. Tree surgery is covered thoroughly, the chapters including spraying and equipment, tree structure, trimming and bracing large trees, cavity repair and filling material, feeding trees and moving trees, propagation, grafting and budding. 300 pages, illustrated\$4.00

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